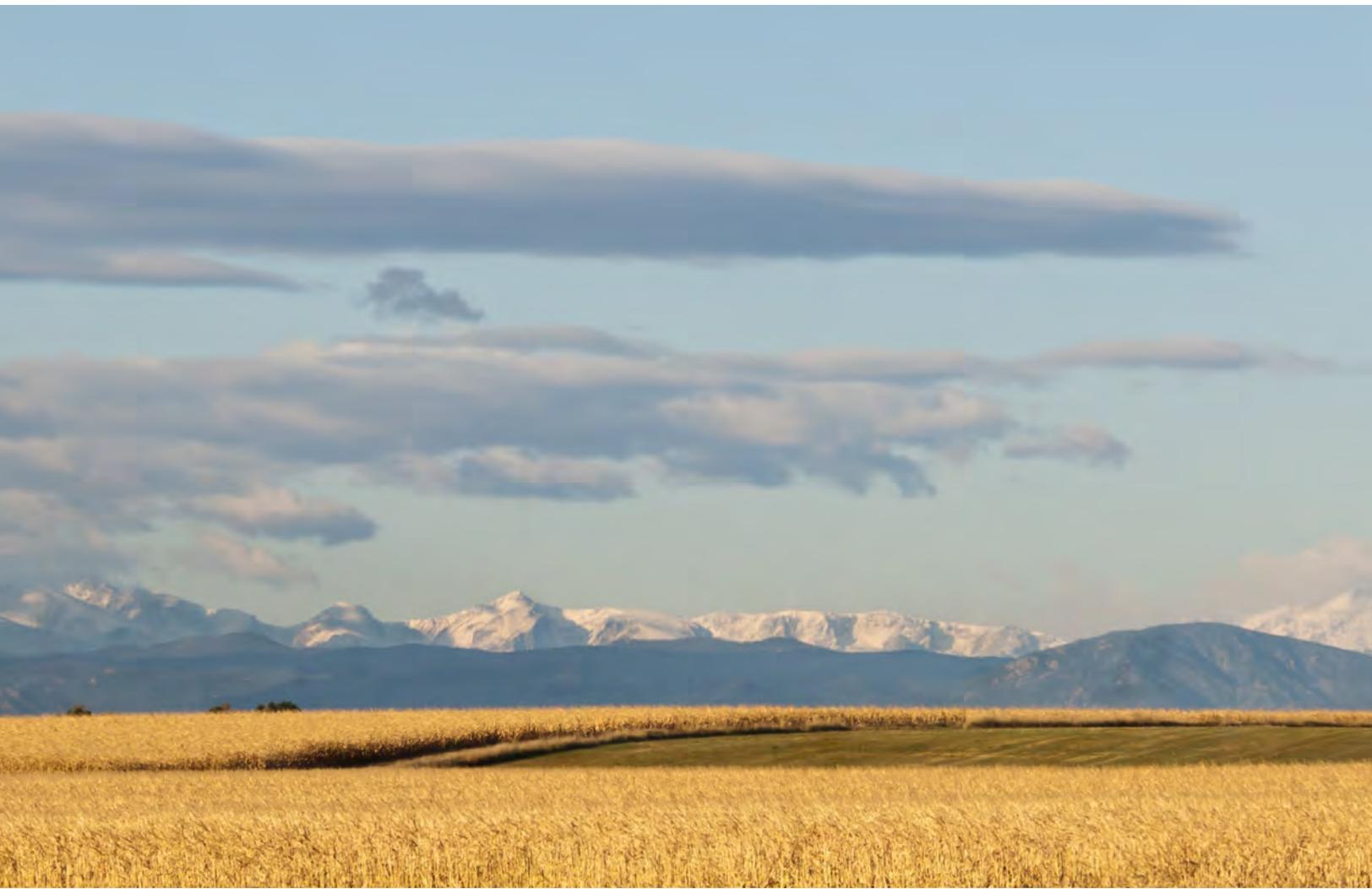


# 2022 Community Health Assessment

Tri-County Health Department

Arapahoe County | Colorado



Released: March 2022  
Updated: May 2022



ARAPAHOE COUNTY  
COLORADO'S FIRST

*Promote, protect and improve the lifelong health of individuals and communities in Adams, Arapahoe and Douglas Counties through the effective use of data, evidence-based prevention strategies, leadership, advocacy, partnerships and the promotion of health equity.*

Arapahoe County

Dear residents, county leaders, partners, and staff:

The mission of Tri-County Health Department is to promote, protect and improve the lifelong health of individuals and communities in Adams, Arapahoe, and Douglas Counties through the effective use of data, evidence-based prevention strategies, leadership, advocacy, partnerships, and the promotion of health equity. In line with our mission, the Centers for Disease Control and Prevention's Essential Public Health Services, and Colorado's Public Health Improvement Act of 2008, every five years Tri-County Health Department completes a Community Health Assessment. The COVID-19 pandemic has undoubtedly impacted us all; in order to strategically inform and assist the prioritization of health issues in Arapahoe County, this assessment, completed ahead of the five-year cycle, provides an overview of the current health status of Arapahoe County residents.

As part of this Community Health Assessment, we worked closely with community-based organizations and partners to conduct focus groups and community surveys of our community members, partners, county leaders, and staff. They told us that health in their communities is highly influenced by social connection, economic security, employment, public health policy, access to affordable health and wellness services, and safe places to live and grow. We organized the report around these concepts, focusing on what influences our health and how a community supports an individual's health. As did the 2018 regional Community Health Assessment, this report aims to talk about health outcomes and behaviors in the context of the social, economic, and environmental factors in Arapahoe County that provide the context in which we live our lives.

"Public Health is what we do together as a society to ensure the conditions in which everyone can be healthy."<sup>i</sup> Working together strategically to make data- and community-informed decisions has never been so important. As the 2021 bipartisan report, "Public Health Forward" reminds us: "Although a disproportionate amount of attention is placed on medical care and the treatment of diseases, illnesses, and injuries, public health takes a community-wide approach to improving health and the social factors that contribute to good health. Healthy behaviors, social and economic factors, the physical environment, and other issues account for 80% of health outcomes."<sup>ii</sup> While we absolutely must have access to affordable, timely health services, public health aims to prevent illness and disease by fostering and bolstering the systems and factors that support health and strategically addressing the systems that do not.

We hope that the information contained in this Community Health Assessment will provide a useful synopsis of the health status in Arapahoe County and increase the understanding of a healthy community and the role we all play in supporting health. With that, I am pleased to present the 2022 Arapahoe County Community Health Assessment.

Sincerely,



John M. Douglas, Jr., MD  
Executive Director

<sup>i</sup> Public Health 3.0: A Call to Action to Create a 21<sup>st</sup> Century Public Health Infrastructure. (2016) Office of the Assistant Secretary for Health, U.S. Department of Health and Human Services. Accessed November 16, 2016 at <https://www.healthypeople.gov/sites/default/files/Public-Health-3.0-White-Paper.pdf>

<sup>ii</sup> Public Health Forward: Modernizing the U.S. Public Health System. (2021) Bipartisan Policy Center. Accessed February 23, 2022 at <https://bipartisanpolicy.org/report/public-health-forward/>

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*Promote, protect and improve the lifelong health of individuals and communities in Adams, Arapahoe and Douglas Counties through the effective use of data, evidence-based prevention strategies, leadership, advocacy, partnerships and the promotion of health equity.*

**Arapahoe County**



**Optimal health across the lifespan for the populations we serve.**

Tri-County Health Department Vision Statement

**Purpose**

The purpose of this community health assessment (CHA) is to learn about the community: the health of the population, contributing factors to higher health risks or poorer health outcomes of identified populations, and community assets and resources that can be mobilized to improve population health.

**Process**

This assessment is a component of the Colorado Health Assessment and Planning System (CHAPS) which provides step-by-step guidance on how to carry out an 8-phased collaborative community health assessment and a public health improvement planning process on a 5-year cycle. The process hinges on engaging the community to increase the availability and quality of public health services and ultimately improve health outcomes.

**Community Engagement**

Our most robust engagement effort to date, community and partner input for this assessment was sought in several ways: direct outreach to partners, staff, clients, and county leaders, as well as thoughtful partnership with local organizations.

In May 2021, Tri-County Health Department (TCHD) issued a Request for Proposals to solicit community-based organizations (CBOs) to assist with community engagement, through focus group or survey outreach, focusing on populations with whom they were already connected: Black, Indigenous, and People of Color (BIPOC); low-income, essential service workers; unemployed; LGBTQI+; seniors; youth; Non-English, Non-Spanish speakers; refugees and immigrants; single-parent households; and, people experiencing homelessness. Using the Centers for Disease Control and Prevention’s Social Vulnerability Index to map higher-need census tracts, TCHD contracted with three community-based organizations serving Arapahoe County residents to

- Respect
- Integrity
- Courage
- Excellence
- Leadership
- Collaboration
- Stewardship
- Innovation

Tri-County Health Department Values and Guiding Principles

conduct focus groups and survey outreach: Sheridan Health Services, Innovative Housing Concepts, and Aurora Economic Opportunity Coalition (Map 1). CBOs also completed one-on-one survey entry for community members with reduced or no technological accessibility or literacy.

In addition to the community focus groups, community member input was collected through online surveys (in English and Spanish). By utilizing both surveys and focus groups, we maximized participation from a diverse array of voices to capture unique needs from across the TCHD jurisdiction. Generally, focus groups allow participants to hear from one another and discuss their communities conversationally, creating rich context. They provide a platform for community members to share anything on their mind, not just those items being asked about. They permit conversation. However, focus groups require coordination and generally garner fewer individual responses than surveys, which are easy to distribute and can be completed at any time. Because of this, surveys can result in a higher number of responses.

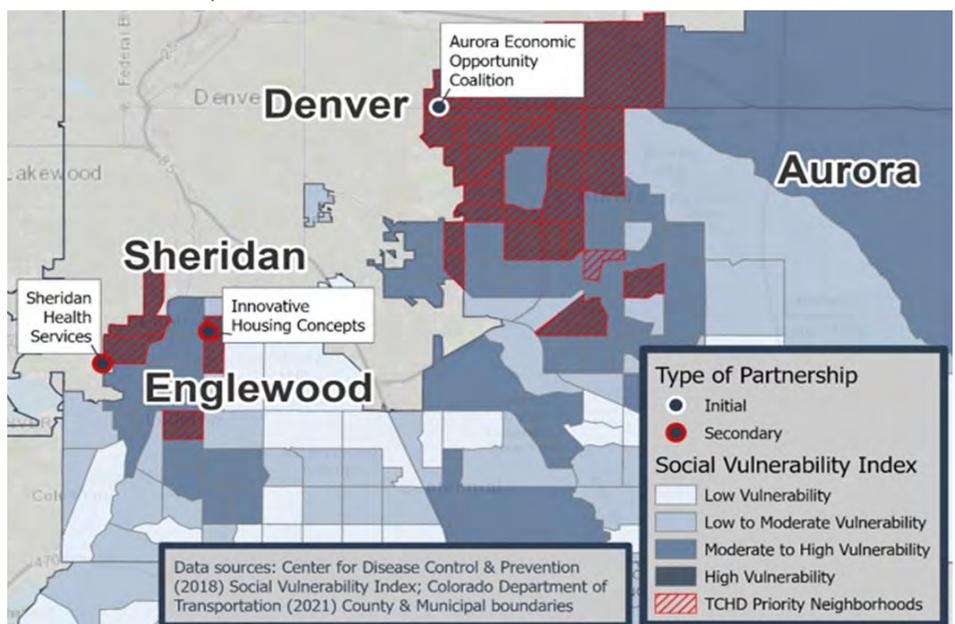
Tri-County Health Departments partners, staff, and elected officials and county leaders also provided comments through surveys. Among the questions asked, there were three essential questions:

- 1) What do you need to be your most happy, healthy, thriving self?
- 2) What are the characteristics of a happy, healthy, thriving community?
- 3) Identify the three most important health issues facing the communities in which you live, work and play.

These data were used to develop our image of a healthy community and guided the content of this assessment.

Nearly 1,000 people (n=960) participated in the Arapahoe County surveys: 70% were completed by community residents and 15% of the community surveys were completed in Spanish. Our partner community-based organizations facilitated eight focus groups, in English and Spanish, with over 100 community members participating.

**Map 1. TCHD-funded Community-Based Organizations doing CHA Community Engagement, by Social Vulnerability Index-mapped Census Tracts, 2019**



TCHD Priority Neighborhoods are areas of high vulnerability and/or harder-to-reach populations

**Promote, protect and improve the lifelong health of individuals and communities in Adams, Arapahoe and Douglas Counties through the effective use of data, evidence-based prevention strategies, leadership, advocacy, partnerships, and the promotion of health equity.**

Tri-County Health Department Mission Statement

## Selecting Indicators For This Assessment

The health behaviors and outcomes in this report reflect community priorities as stated in the input survey. In addition, a wide range of indicators were considered from a variety of sources including:

- *Tri-County Health Department 2018 Community Health Assessment*
- *The Center for Disease Control and Prevention’s Winnable Battles*
- *America’s Health Rankings*
- *County Health Rankings and Roadmaps*
- *Indicators of Health Inequalities*
- *Colorado Health and Environmental Assessment 2013*
- *Colorado Health Indicator Set*
- *Community Health Assessments by other Local Public Health Departments*
- *Other Local and State Assessments*

Tri-County Health Department’s epidemiologists routinely track and monitor over 200 indicators derived from a list developed through an extensive stakeholder process at the state level in which multidisciplinary partners used established criteria (i.e., feasible, understandable, relevant, valid, reliable, and comparable) to select core indicators. This list was further vetted and refined by TCHD staff.

The final indicator list resulted from community priorities, common key indicators at the national, state, and local level, and TCHD’s epidemiologic analysis of key health problems.

## Data Used in this Report

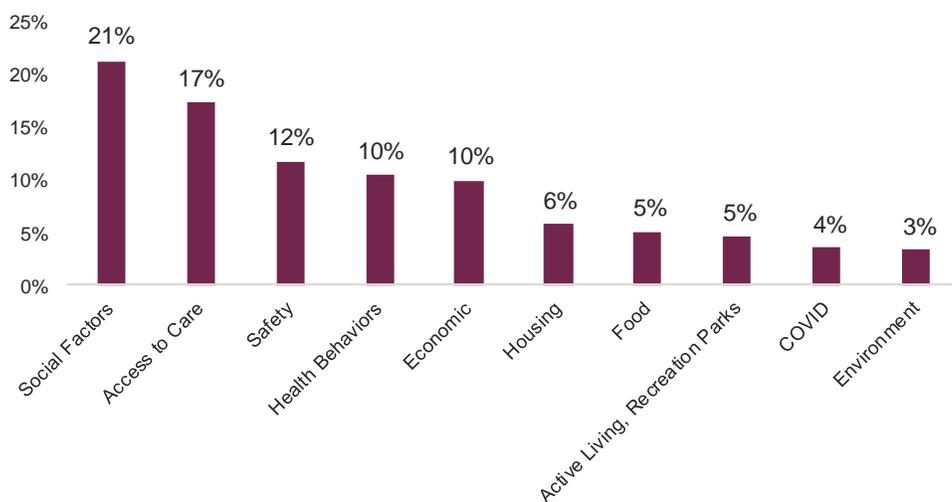
The data presented in this report were compiled from a variety of sources and include both primary (collected for local health assessment purposes) and secondary data sources (collected for another purpose, usually by another organization/institution). Portions of the data used in this assessment were quantitative (information is described in terms of quantity of an item, e.g., the percent of people who graduate from high school), while the data from community, staff, and partner input surveys and community-based-organization focus groups were qualitative (information is described in terms of attributes, characteristics, properties, such as perceptions about what makes up a healthy community).



## Primary Data Sources: Surveys and Focus Group Findings

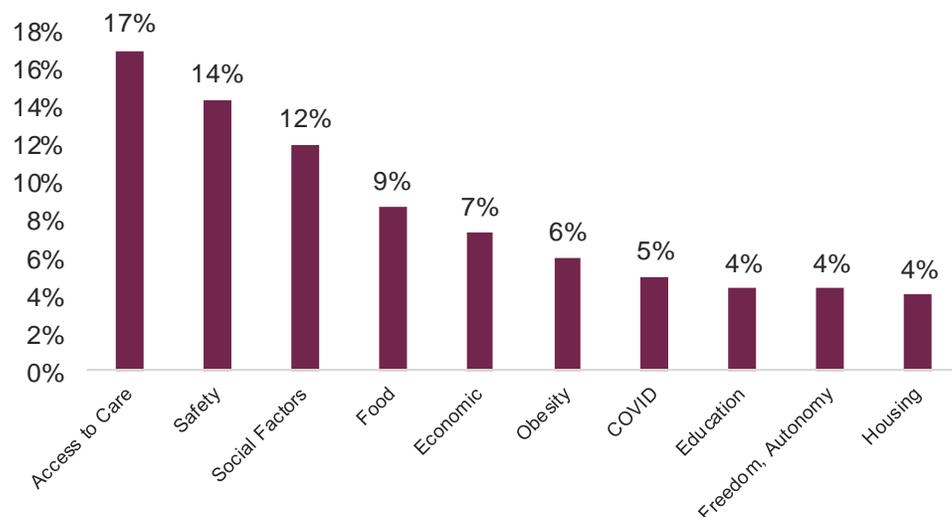
In the fall of 2021, 673 community members, 34 partners and stakeholders, and 253 TCHD staff serving Arapahoe County provided input into this assessment by responding to a survey which asked them to name the three most important characteristics of a happy, healthy and thriving community (Figure 1) and the three most important health problems in their communities (Figure 2). Over 100 community members also participated in local focus groups facilitated by community-based organizations; these results are also included in Figures 1 and 2 below. Community members were invited to participate in the survey through advertisements on TCHD’s website and Facebook, through links disseminated by the Public Information Officer Arapahoe County and organizational partners, and, through outreach conducted by TCHD-funded partnering community-based organizations.

**Figure 1: What are the three most important characteristics of a happy, healthy, and thriving community?**



Tri-County Health Department, CHA Community Engagement Process, 2021

**Figure 2: What are the three most important health problems in your community?**



Tri-County Health Department, CHA Community Engagement Process, 2021

## Secondary Data Sources

In addition to primary data sources, secondary sources were also used. At the time of this writing, the most recent data available from each source were used. Secondary data sources included:

- American Community Survey (ACS), U.S. Census Bureau
- Centers for Disease Control and Prevention
- Colorado Bureau of Investigations
- Colorado Department of Education
- Colorado Department of Human Services
- Colorado Department of Public Health and Environment (CDPHE)
  - \* Colorado Behavioral Risk Factor Surveillance System
  - \* Colorado Electronic Disease Reporting System
  - \* Colorado Vital Records
  - \* Colorado WIC Program (The Special Supplemental Nutrition Program for Women, Infants, and Children)
  - \* Health eMoms Survey
  - \* Healthy Kids Colorado Survey
  - \* Pregnancy Risk Assessment Monitoring System
  - \* STI/HIV/Viral Hepatitis Branch
  - \* Tuberculosis and Refugee Health Program
- Colorado Department of Transportation
- Colorado Discharge Data Set, Colorado Hospital Association
- Colorado Health Access Survey, Colorado Health Institute
- Colorado Health Foundation Pulse Survey
- Colorado Health Observation Regional Data Service
- Colorado Immunization Information System
- Environmental Protection Agency
- Feeding America
- Metro Denver Homeless Initiative
- State Demography Office, Colorado Department of Local Affairs
- U.S. Bureau of Labor Statistics
- United States Department of Agriculture

## Data Limitations

There are limitations to all data. Although we have made every effort to ensure the quality of the data used in this report, some limitations and weaknesses exist.

### Timeliness

There is often a lag between when data are collected and released. For instance, data collected in one calendar year may not be available for six months, or longer, after the close of that year. By combining years of data together, we can often create stable estimates or protect confidentiality; however, this can hide recent trends. At the time of this report, for example, 2020 American Community Survey (U.S. Census Bureau) data are not yet available for all data.

### Completeness

Data can be incomplete for various reasons related to data collection, such as specific question or question wording changing year-to-year, specific populations not counted consistently or at all, or missing data elements due to errors in data entry.

### Accuracy

Data can be inaccurate due to measurement errors, coding errors, or analytic errors. Response bias and recall bias can also affect accuracy. We do not know that people who respond to surveys are similar to those who do not respond; people who decide to respond may do so because of a motivation that someone else may not have. The error that may occur due to the people who respond – and their unknown motivations – is called response bias. Similarly, recall bias can occur when people are asked about things that may have occurred in the past.

### Small numbers

Most of the data used in this report are based on samples of the population. If a sample is very small, it can create unstable estimates; caution must be used in their interpretation. Small samples or events that occur to a small portion of the population need to be displayed carefully so as not to identify an individual.

### Geographic relevance

Most data are collected at particular geographic scales and therefore may be hard to apply to smaller or larger areas of interest. For example, most of the large, national surveillance systems in this country only collect data at the state level; therefore, data at the county, city, or neighborhood level may be limited or even unavailable.

### Misrepresentation or underrepresentation

It is important to measure patterns of health among subgroups of the population. Years of research have established critical health differences among various populations. For instance, health conditions and risks can vary depending on age, race and ethnicity, and sex and gender. Race and ethnicity are usually measured because they are important determinants of access to societal resources. There are also important social and symbolic meanings conveyed by the concepts of race and ethnicity which can impact health.<sup>1</sup> The categories of race and ethnicity used in this report do not reflect biological characteristics but rather self-perceived membership in a particular group, or assigned race/ethnicity in the case of birth and death data. Self-reporting is limited by the choices given the respondent; this has the potential to misrepresent one's true identify. In the case of sex and gender, sex is assigned at birth (typically by the appearance of external genitalia and recorded on the birth certificate as male or female) and people who self-identify with their assigned sex are "cisgender." "Transgender" individuals are those who do not self-identify with their assigned sex at birth. The term gender, or gender expression, refers to psychological dimensions of sexual identity, gender identity, social beliefs, and behavior, such as identifying as heterosexual, lesbian, gay, or bisexual.<sup>2</sup> Most of the data systems used in this report only collect sex-assigned- at-birth data by self-report, visual inspection, or voice sound in the case of telephone surveys. Gender identity is infrequently measured; therefore, misidentification and/or underrepresentation may be weaknesses of these data.

<sup>1</sup>Hahn, R. A., & Stroup, D. F. (1994). Race and ethnicity in public health surveillance: criteria for the scientific use of social categories. *Public Health Reports*, 109(1), 7–15.

<sup>2</sup>Conron, K. J., Landers, S. J., Reisner, S. L., & Sell, R. L. (2014). Sex and Gender in the US Health Surveillance System: A Call to Action. *American Journal of Public Health*, 104(6), 970–976. <http://doi.org/10.2105/AJPH.2013.301831>

## What is a Healthy Community?

Based on community input, the image below depicts the components of a healthy community. This assessment is designed to reflect the status of our communities in light of this image of a healthy community.

# What is a **Healthy Community?**



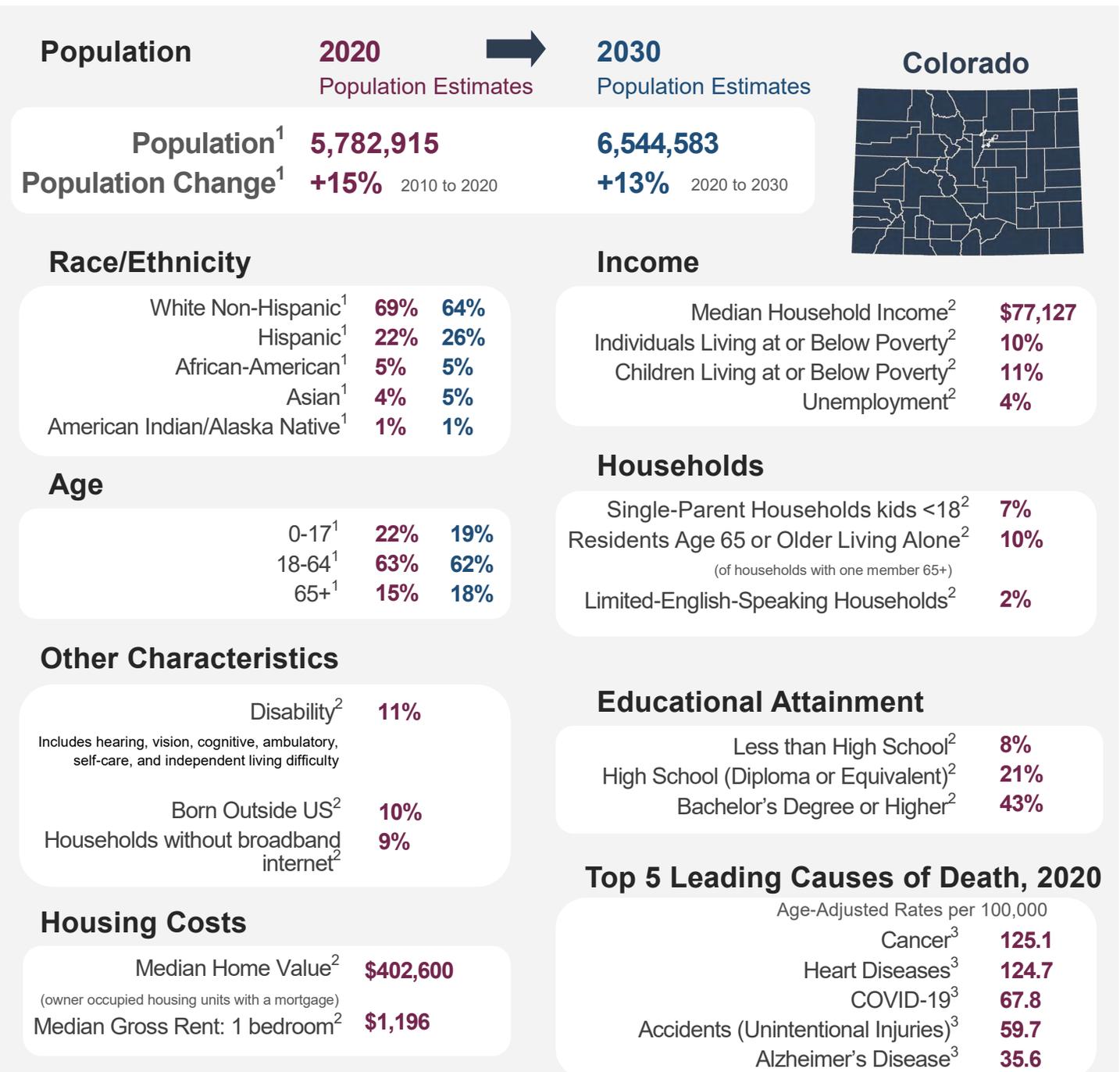
## A Healthy Community is:



These statements were drawn from various materials found on the World Wide Web and modified to reflect findings from TCHD's Community Input Survey.

## Community Characteristics

The demographic characteristics of the population are important in understanding the health risks and challenges, strengths and opportunities of the community. Characteristics such as age, gender, and genetic makeup are closely linked to health outcomes. Socio-economic factors such as education, socio-economic status, and household composition are likewise associated with health risk and protective factors and outcomes. The following section displays key demographics for Colorado as well as Arapahoe County for comparison purposes.



<sup>1</sup>Source: Colorado Department of Local Affairs, July 2019 Estimates, 2030 Population Forecast

<sup>2</sup>Source: American Community Survey, 1-Year Estimates 2019

<sup>3</sup>Source: Vital Records Program, Colorado Department of Public Health and Environment

## Community Characteristics: Arapahoe County

### Population

**2020**  
Population  
Estimates



**2030**  
Population  
Estimates

### Arapahoe County



Population<sup>1</sup> **655,070** **733,513**  
Population Change<sup>1</sup> **+15%** 2010 to 2020 **+12%** 2020 to 2030

### Race/Ethnicity

White Non-Hispanic <sup>1</sup>	<b>60%</b>	<b>56%</b>
Hispanic <sup>1</sup>	<b>20%</b>	<b>23%</b>
African-American <sup>1</sup>	<b>12%</b>	<b>12%</b>
Asian <sup>1</sup>	<b>7%</b>	<b>9%</b>
American Indian/Alaska Native <sup>1</sup>	<b>1%</b>	<b>1%</b>

### Income

Median Household Income <sup>2</sup>	<b>\$82,710</b>
Individuals Living at or Below Poverty <sup>2</sup>	<b>7%</b>
Children Living at or Below Poverty <sup>2</sup>	<b>8%</b>
Unemployment <sup>2</sup>	<b>4%</b>

### Age

0-17 <sup>1</sup>	<b>23%</b>	<b>21%</b>
18-64 <sup>1</sup>	<b>63%</b>	<b>62%</b>
65+ <sup>1</sup>	<b>14%</b>	<b>18%</b>

### Households

Single-Parent Households, kids <18 <sup>2</sup>	<b>7%</b>
Residents Age 65 or Older Living Alone <sup>2</sup> (of households with one member 65+)	<b>9%</b>
Limited-English-Speaking Households <sup>2</sup>	<b>4%</b>

### Other Characteristics

Disability <sup>2</sup> Includes hearing, vision, cognitive, ambulatory, self-care, and independent living difficulty	<b>10%</b>
Born Outside US <sup>2</sup>	<b>16%</b>
Households without broadband internet <sup>2</sup>	<b>7%</b>

### Educational Attainment

Less than High School <sup>2</sup>	<b>7%</b>
High School (Diploma or Equivalent) <sup>2</sup>	<b>20%</b>
Bachelor's Degree or Higher <sup>2</sup>	<b>44%</b>

### Housing Costs

Median Home Value <sup>2</sup> (owner occupied housing units with a mortgage)	<b>\$408,500</b>
Median Gross Rent: 1 bedroom <sup>2</sup>	<b>\$1,252</b>

### Top 5 Leading Causes of Death, 2020

Age-Adjusted Rates per 100,000	
Cancer <sup>3</sup>	<b>127.8</b>
Heart Disease <sup>3</sup>	<b>118.5</b>
COVID-19 <sup>3</sup>	<b>74.9</b>
Accidents (Unintentional Injuries) <sup>3</sup>	<b>63.1</b>
Alzheimer's Disease <sup>3</sup>	<b>44.8</b>

<sup>1</sup>Source: Colorado Department of Local Affairs, July 2019 Estimates, 2030 Population Forecast

<sup>2</sup>Source: American Community Survey, 1-Year Estimates 2019

<sup>3</sup>Source: Vital Records Program, Colorado Department of Public Health and Environment





## Social Connections and Health



*A healthy community is where building a sense of belonging and social connection is a priority and where diversity and support for people of all ages, race and ethnicities, and abilities are valued.*

 Tri-County Health Department | 2022 Community Health Assessment  
Arapahoe County, Colorado



# Social Connections and Health

A healthy community is where building a sense of belonging and social connection is a priority and where diversity and support for people of all ages, race and ethnicities, and abilities are valued.

Arapahoe County



## Key Insights

- Positive social relationships are important for mental and physical health, and overall wellbeing.
- The COVID-19 pandemic highlighted the importance of social connection for many Arapahoe County residents.
- In our community survey, we heard from residents who felt disconnected from each other and from social, political, and economic systems in their communities.

**“Social ties can instill a sense of responsibility and concern for others that then lead individuals to engage in behaviors that protect the health of others, as well as their own health. Social ties provide information and create norms that further influence health habits. Thus, in a variety of ways, social ties may influence health habits that in turn affect physical health and mortality.**

Source: J Health Soc Behav. 2010 ; 51(Suppl): S54–S66. doi:10.1177/0022146510383501

<sup>1</sup> <http://www.apa.org/pi/lgbt/programs/safe-supportive/school-connectedness/default.aspx>

Overwhelmingly, our community members, partners, and staff said that community connection and belonging were not only key factors of a healthy, happy, and thriving community—but that they needed connection with others to be their happiest, healthiest selves. Specifically, they mentioned the importance of being with family and friends, kindness, social support, respect, and unity. While social connection was a key theme in the 2018 Community Health Assessment, isolation from others and fear felt by community members during the COVID-19 pandemic brought home the importance of belonging and support for many community members.

Social connection is related to health in several ways. First, simply being around people who watch out for each other can reduce the risk of poor health outcomes occurring or the chance that an accident will lead to serious injury or death. There is safety in numbers. Second, connection and belonging can be protective against the development of certain behaviors that increase risk for poor health outcomes. Social connection has long been recognized as a factor that can reduce the chance that people will engage in less-healthy behaviors such as heavy drinking, substance use, and overeating or eating unhealthy foods. In fact, research shows that social connectedness increases the chances that children will be engaged in school,<sup>1</sup> and that people who do not want to become parents will use effective birth control; it also reduces the risk of suicide attempt.<sup>2</sup> Finally, connection reduces the chance of experiencing isolation and loneliness. In their 1988 article, House, Landis, and Umberson show the relationship between poor social





# Social Connections and Health

A healthy community is where building a sense of belonging and social connection is a priority and where diversity and support for people of all ages, race and ethnicities, and abilities are valued.

Arapahoe County

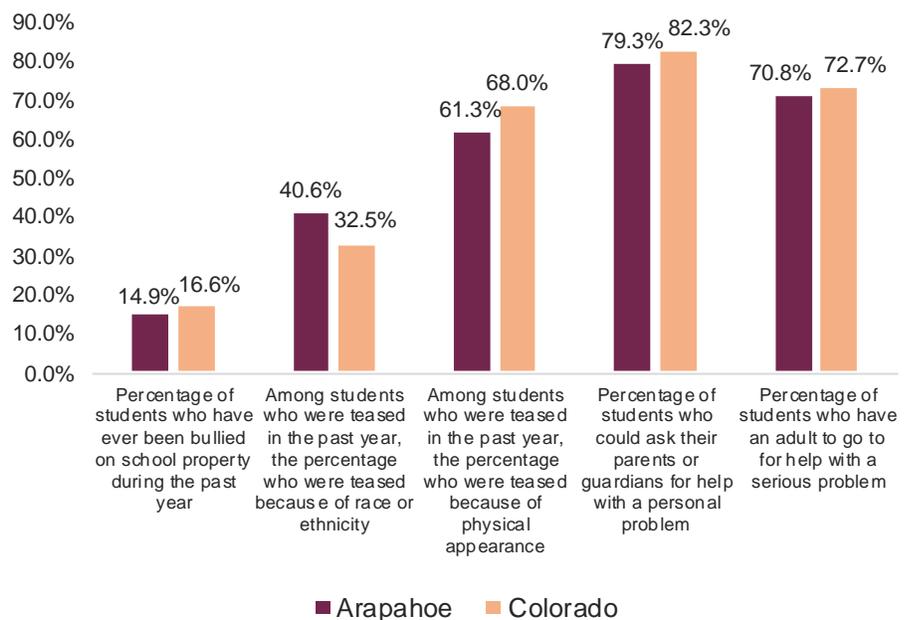
**“Social support is a communication behavior that plays a critical role in the maintenance or disruption of mental and physical health.”**

Source: Chris Segrin & Stacey A. Passalacqua (2010) Functions of Loneliness, Social Support, Health Behaviors, and Stress in Association With Poor Health, *Health Communication*, 25:4, 312-322, DOI: 10.1080/10410231003773334

integration and risk for mortality,<sup>3</sup> and in their 2010 meta-analysis, Holt-Lunstad, Smith, and Layton found that “individuals with adequate social relationships have a 50% greater likelihood of survival compared to those with poor or insufficient social relationships.”<sup>4</sup> That would mean that social support and connection is as good for your health as quitting smoking. It is important to note, however, that only positive social connection and relationships are associated with good health; negative, stressful relationships can have the opposite effects. Not only is positive social connection protective against the development of behaviors that can be detrimental to health, such as substance use, but research shows that social connection can reduce the risk of death in people with and without certain chronic conditions.<sup>5,6</sup>

Unfortunately, data that measure social connection are rare. We can, however, glean some information from surveys that ask about social connection less directly. In 2019, before the COVID-19 pandemic, 15% of high school students in Arapahoe County had been bullied on school property; of those, two in five were bullied due to race or ethnicity and three in five were bullied for physical appearance (Figure 1). Younger students, females, and students identifying as bisexual, gay or lesbian, transgender, or those uncertain of their sexual orientation or gender identity were more likely to report bullying. Slightly fewer students reported electronic bullying (13.2%) compared to in-person bullying (14.9%). The majority of students in Arapahoe County report having an adult to go to for help with a serious problem (71%) and 79% report being able to ask their parent or guardian for help with a personal problem. Student participation in extracurricular activities is also fairly high (64%). However, fewer than one in three (27%) of high school students report enjoying being in school during the past year.<sup>7</sup>

**Figure 1: Connection and Belonging among High School Students, Arapahoe County, 2019**



Source: Healthy Kids Colorado Survey (2019), Colorado Department of Public Health and Environment

<sup>2</sup> Milner, Allison, et al. "Social Connections and Suicidal Behaviour in Young Australian Adults: Evidence from a Case-Control Study of Persons Aged 18–34 Years in NSW, Australia." *SSM - Population Health*, vol. 1, 2015, pp. 1–7., doi:10.1016/j.ssmph.2015.09.001

<sup>3</sup> House, J., et al. "Social Relationships and Health." *Science*, vol. 241, no. 4865, 1988, pp. 540–545., doi:10.1126/science.3399889.

<sup>4</sup> Holt-Lunstad, J., et al. "Social relationships and mortality risk: a meta-analytic review." *PLoS Medicine*, vol. 7, issue 7, e1000316, July 2010., doi: 10.1371/journal.pmed.1000316.

<sup>5</sup> [https://www.cssp.org/reform/strengthening-families/2013/SF\\_Social-Connections.pdf](https://www.cssp.org/reform/strengthening-families/2013/SF_Social-Connections.pdf)

<sup>6</sup> Umberson, Debra, and Jennifer Karas Montez. "Social Relationships and Health: A Flashpoint for Health Policy." *Journal of Health and Social Behavior*, vol. 51, no. 1\_suppl, 2010, doi:10.1177/0022146510383501.

<sup>7</sup> Healthy Kids Colorado Survey, CDPHE







*A healthy community is where building a sense of belonging and social connection is a priority and where diversity and support for people of all ages, race and ethnicities, and abilities are valued.*

## Arapahoe County

In their 2015 article, Case and Deaton found an increase in mortality rates for white, middle-aged adults that has occurred over the past 15-20 years is largely due to increases in suicides, drug overdoses, and alcohol-related liver disease.<sup>9</sup> The researchers named these deaths “deaths of despair” which are characterized by deteriorating economic, social and behavioral conditions, such as under- or unemployment, stress and hopelessness, isolation, family dysfunction, poor social support, and addiction.<sup>10</sup> Enhancing social connection could have an effect in mitigating this increase in deaths of despair.

Finally, civic engagement is important to health. Voting is related to health in a few ways: by building community connectedness and civic engagement, by enhancing self-efficacy, and, more directly, by giving citizens the ability to vote on matters impacting health. Voting is one way that people can shape their environments rather than simply being shaped by them. Kawachi and Berkman (2000) note the relationship between political activities, like voting, and social capital – social resources, connection, and collective action. “Within the United States, levels of civic trust and group membership are strongly correlated with geographic variations in voter turnout at elections.”<sup>11</sup> Voting is a social determinant of health and has been recognized by the U.S. government’s Healthy People 2020 as well as by the American Public Health Association, health research groups, health foundations, and health departments across the country. In the November 2020 election , 71.3% of people eligible to vote in Colorado were registered to vote, and 67.6% of people eligible to vote actually voted (94.8% of those who were registered voted).<sup>12</sup> In Arapahoe County, 84%<sup>13</sup> of registered voters voted in the 2020 general election, up from 74% in 2016.<sup>14</sup> Increasing the voter activity of registered voters and engaging eligible citizens to register to vote can help promote civic engagement and community connectedness and, ultimately, health in our communities.

Social connection, belonging, and engagement are important to our health. By supporting each other and our neighbors, we can improve the health and wellbeing of our communities.

<sup>9</sup> Rising midlife morbidity and mortality, US whites. Anne Case, Angus Deaton. Proceedings of the National Academy of Sciences Dec 2015, 112 (49) 15078-15083; DOI:10.1073/pnas.1518393112

<sup>10</sup> Stein, E. M., Gennuso, K. P., Ugboaja, D. C., & Remington, P. L. (2017). The Epidemic of Despair Among White Americans: Trends in the Leading Causes of Premature Death, 1999–2015. *American Journal of Public Health*, 107(10), 1541–1547. <http://doi.org/10.2105/AJPH.2017.303941>

<sup>11</sup> Kawachi, I., and Berkman, L. (2000) *Social Cohesion, Social Capital, and Health*. In: Berkman, L.F. and Kawachi, I. Eds., *Social Epidemiology*, Oxford University Press, New York, 174-190.

<sup>12</sup> <https://www.census.gov/data/tables/time-series/demo/voting-and-registration/p20-585.html>

<sup>13</sup> <https://www.arapahoegov.com/sites/default/files/2020-12/2020%20General%20Official%20Summary%20Report.pdf>

<sup>14</sup> <https://www.arapahoegov.com/ArchiveCenter/ViewFile/Item/1736>

## What Our Community Said

- Over one in ten comments from the community (10.6%) related to social factors or social connection or connectedness.
- Of these comments, nearly one in three (29.1%) comments specifically mentioned the importance of connection to family.
- Many community members noted how important their family and friends were; isolation and quarantine during the COVID-19 pandemic made this clearer to many people.
- The importance of positive social connection was mentioned often, making up one-third (33.8%) of all responses in this category.
- Many people mentioned concern about the social, moral, and political fabric of society.





*A healthy community is where meaningful employment opportunities offering a living wage are available to all residents.*

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## Arapahoe County



### Key Insights

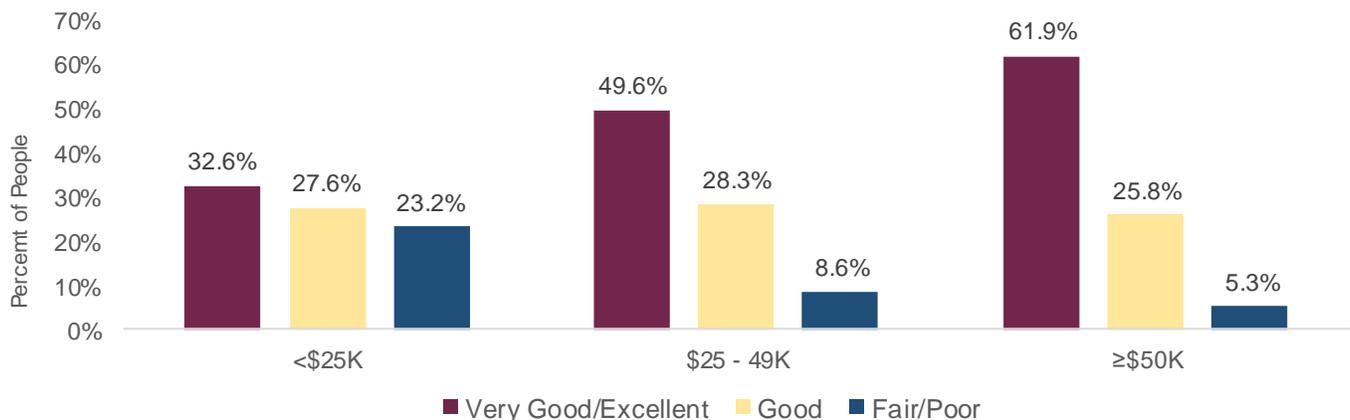
- Economic security has a direct, positive relationship to mental and physical health and wellbeing.
- Opportunities that lead to wealth are not equitably distributed in our communities.
- Income increases are not keeping pace with the increasing cost of living expenses, challenging upward economic mobility.
- The COVID-19 pandemic negatively impacted our economies and the economic security of our residents.

### Economic security is a key to health.

Since our nation’s founding, the promise of economic opportunity has been a central component of the American Dream. “An economy that grew to be the world’s biggest and most dynamic also held out the promise that hard work, vision, and risk—regardless of family background—would be rewarded.”<sup>1</sup> In our community survey, partners and community members echoed this desire for the American Dream – the hope for a strong economy that benefits everyone in our communities and the ability of people to pursue opportunity, including meaningful employment that pays a living wage. Unfortunately, they noted that not all people in our communities are paid a living wage and able to meet their basic needs. Given the importance of income to not only meet basic needs, but also to access other services, resources, and opportunities, it is no surprise that economic security is a key to health.

<sup>1</sup> [https://www.brookings.edu/wp-content/uploads/2016/06/02\\_economic\\_mobility\\_sawhill.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/02_economic_mobility_sawhill.pdf)

Figure 1: Self-reported general health status by annual household income, 2018-2020, Arapahoe County



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

A healthy community is where meaningful employment opportunities offering a living wage are available to all residents.

## Arapahoe County

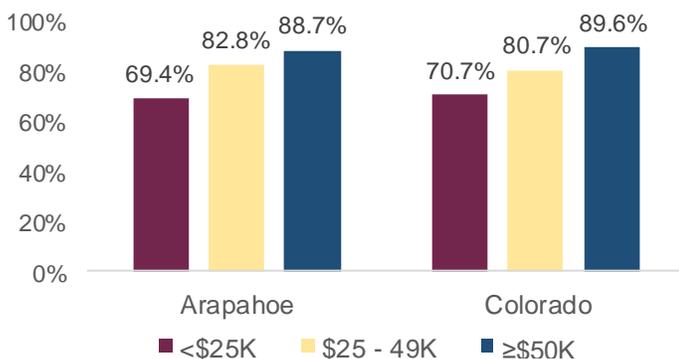
**“To some extent, income and wealth directly support better health because wealthier people can afford the resources that protect and improve health. In contrast to many low-income people, they tend to have jobs that are more stable and flexible; provide good benefits, like paid leave, health insurance, and worksite wellness programs; and have fewer occupational hazards. More affluent people have more disposable income and can more easily afford medical care and a healthy lifestyle—benefits that also extend to their children.”<sup>2</sup>**

Income impacts health in several ways. In fact, self-reported health status has a direct relationship with income: the greater the income, the more likely people are to report being healthy. Figure 1 indicates percentages of people reporting health status by three income categories: less than \$25,000 annual household income, between \$25,000 and \$49,999 annual household income, and greater than or equal to \$50,000. In this figure we see that the greater the income, the greater the differences in health status.

Income is an important factor in one’s ability to access and/or pay for health care costs and resources: health services not covered by insurance, including one’s deductible, for example. It also influences one’s ability to access and/or pay for services and resources that can affect health and wellbeing, such as healthy housing or high quality childcare services. Indirectly, income is a key factor in many of the choices people make every day, from the kind of food they buy, to the way they exercise or recreate, to whether or not they can take a vacation. Figure 2 shows the relationship between annual household income and ability to participate in leisure time physical activity. The higher the income, the more likely one is able to participate in leisure time physical activity.

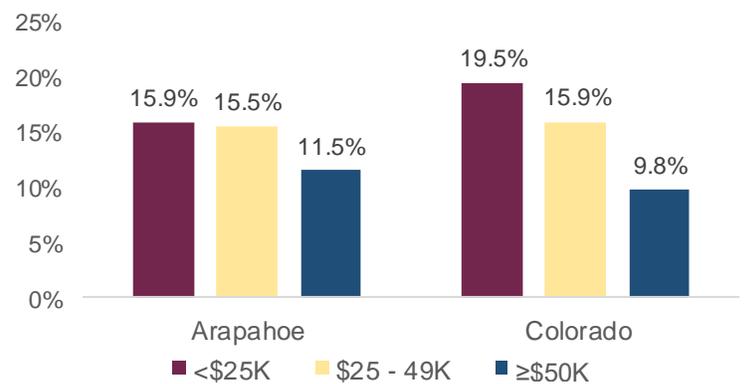
Like physical health, mental health is a combination of environmental, social, and biological factors; however, in Arapahoe County, individuals with higher incomes are less likely to experience consistently poor mental health (Figure 3). As annual household income increases, the

**Figure 2: Percentage of people participating in leisure time physical activity, by annual household income, 2020**



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

**Figure 3: Percentage of people experiencing 14+ days of poor mental health (of past 30 days), by annual household income, 2020**



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

<sup>2</sup> <https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf>

A healthy community is where meaningful employment opportunities offering a living wage are available to all residents.

## Arapahoe County

**“Closing the wage gap between current wages and the Self-Sufficiency Standard requires both reducing costs and raising incomes.”**

Source: Colorado Center on Law and Policy

**“Poverty and systemic inequality [lead] to inability to afford housing, healthcare, food and basic necessities of life.”**

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

**“[Necesito] tener la suficiente economía para salir adelante.”**

*“I need to have sufficient income in order to get ahead.”*

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

percentage of people reporting 14 or more poor mental health days in the past 30 days decreases.

How far one’s income goes is closely tied to the cost of living: how much money one has to spend is directly related to how much different things cost. When thinking of the impact of income on health to examine the economic security of our communities, it is important to ask questions such as, “How much do things cost?” and “How many people are in poverty? Unemployed?” In Arapahoe County, poverty rates vary across populations as well as by neighborhood. Our community members consistently noted that income, employment, and opportunities were necessary to lead happy, healthy, thriving lives. As one person stated, “[Necesito] tener la suficiente economía para salir adelante. (I need to have sufficient income in order to get ahead.)”

Research suggests that living wage is a more realistic measure of purchasing power (how far one’s income goes) related to income than poverty level. Using a market-based approach, the living wage model looks at income needed to afford minimum necessary costs. “The living wage draws on local cost elements and the rough effects of income and payroll taxes to determine the minimum employment earnings necessary to meet a family’s basic needs while also maintaining self-sufficiency.”<sup>3</sup> The minimum wage in Arapahoe County and Colorado is \$12.56 per hour (beginning January 2022), equivalent to an annual full time salary of \$26,125. This is less than the living wage calculation of \$36,192 for a working adult without children.<sup>4</sup> Figure 4 shows a comparison of the current Colorado minimum wage to the living wage for different family types in Arapahoe County and in Colorado. In order to maintain self-sufficiency for all family types presented, each would need to make significantly more per hour than the current minimum wage in Colorado in order for residents to afford basic needs and reach self-sufficiency.

**Figure 4: Hourly Minimum Wage versus Hourly Living Wage by Family Type, Arapahoe County and Colorado, 2020<sup>5</sup>**



<sup>3</sup> <https://livingwage.mit.edu/resources/Living-Wage-Users-Guide-Technical-Documentation-2021-12-28.pdf>  
<sup>4</sup> <http://livingwage.mit.edu/>

A healthy community is where meaningful employment opportunities offering a living wage are available to all residents.

## Arapahoe County

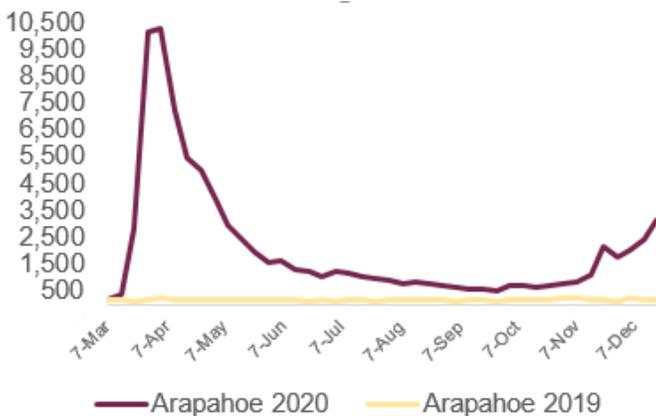
**“Though it is easy to imagine how health is tied to income for the very poor or the very rich, the relationship between income and health is a gradient: they are connected step-wise at every level of the economic ladder. Middle-class Americans are healthier than those living in or near poverty, but they are less healthy than the upper class.”<sup>2</sup>**

A thriving economy has the potential to improve health. In addition to its devastating physical and mental health impacts, the COVID-19 pandemic strained communities economically. Businesses navigated closures and capacity restrictions, people lost their jobs or were forced into early retirement, and consumers changed the way they shop and prioritize expenses. In a statewide survey, nearly one-third (31%) of respondents had hours cut back or wages reduced, one in five (19%) were required to go to work even though they had concerns about their health and safety, and 13% had been laid off – all due to the COVID-19 pandemic.<sup>5</sup> Compared to the 2019 weekly average of unemployment insurance claims, the average number of weekly claims between the weeks of March 21, 2020 and December 29, 2020, increased 938% in Arapahoe County. Figure 5 shows weekly unemployment claims in 2019 and 2020: new claims peaked the week of March 28, 2020, slowly declined in summer months, and rose again in late 2020.<sup>6</sup>

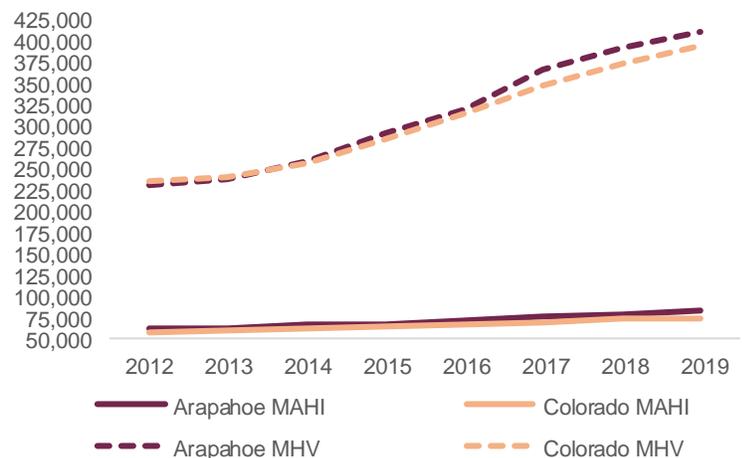
In Arapahoe County, increases in income are not keeping up with increases in living expenses. While median household income increased 37% in Arapahoe County between 2012 and 2019, median home value increased 78% (Figure 6). Similarly, between 2012 and 2019, median gross rent increased 46% in both Arapahoe County and in Colorado.<sup>7</sup>

Examining differences in economic security, a greater percent of minority groups are in poverty than their White peers (Figure 7). While White people make up about 60% of the people below the federal poverty level (FPL) in the county, only 6% of all White people in Arapahoe County are in poverty. Black people make up 13% of the total population in poverty, but over one in five (22%) Black people in Arapahoe County are in poverty. Similarly, while 9.1% of the total population in poverty is Hispanic, 26.3% of Hispanic people in the county live in poverty. In parallel with these trends, Black, Hispanic,

**Figure 5. Weekly unemployment insurance claims, Arapahoe County, 2019 compared to 2020**



**Figure 6: Trends in median home value (MHV) and median annual household income (MAHI), 2012-2019**



Source: Colorado Dept. of Labor & Employment

Source: American Community Survey, Census Bureau, 2019

<sup>5</sup> The Colorado Health Foundation. Pulse Poll (2021). <https://www.copulsepoll.org/results>

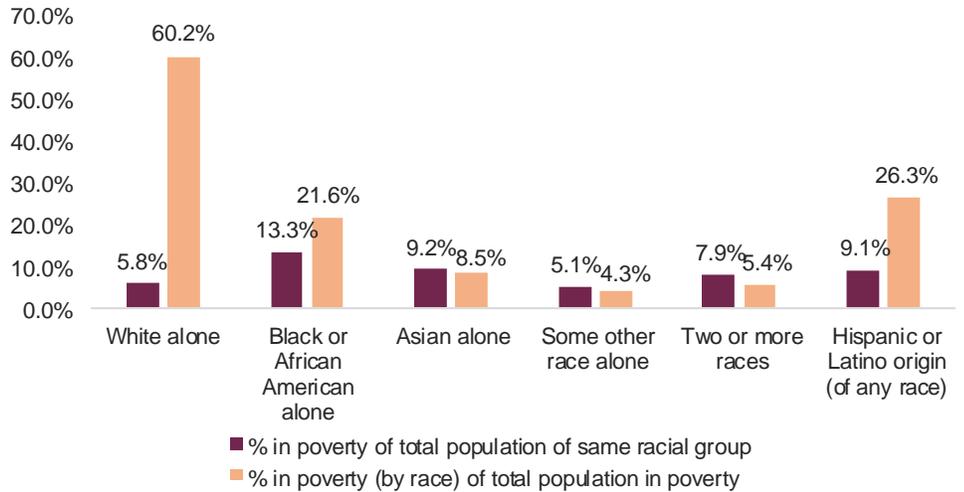
<sup>6</sup> Colorado Dept. of Labor and Employment, Regular UI Weekly Initial Claims by Colorado County, <https://www.colmigateway.com/gsipub/index.asp?docid=807>

<sup>7</sup> U.S. Census Bureau, American Community Survey, 1-year estimates, 2019

**“Am I sick because I am poor, or am I poor because I am sick? It is both: it should be neither.”**

Source: Paul Campbell Erwin, MD, MPH

**Figure 7. People in Poverty by Race, as Percentage of Total People in Poverty and as Percentage of Individual Racial Groups, Arapahoe County, 2019**



Source: American Community Survey, 2019

**“Total disease burden borne by people at the lower end of income distribution is greater irrespective of any specific medical condition.”<sup>11</sup>**

<sup>11</sup> Vega, WA, Scribney WM. “Growing Economic Inequality Sustains Health Disparities.” American Journal of Public Health, vol. 107, No. 10, October 2017. pp 1606-1607. doi: 10.2105/AJPH.2017.304024.

and other racial groups often experience worse health outcomes than their White neighbors.

Improving health means improving the economic systems in which people live, learn, grow, and work, and expanding the opportunities available for all people, but particularly minority groups, to be financially secure and access the resources, services, and advantages that improve health and wellbeing.

## What Our Community Said

- Nearly one in ten (9.2%) comments from community members related to economic factors.
- General economic security, personal finances, and job- or income-related comments made up 82.6% of all economic factor-related comments.
- Community members consistently mentioned the need for stable jobs and for employment that pays a “living wage”: enough to live on, pay for basic needs, and have a little to spare.
- The high cost of health care was mentioned by many community members as a barrier to care; this included regular doctor care, oral health, specialty care, and even emergency care.
- High cost of food and housing was also mentioned by community members.
- Healthy, thriving businesses were mentioned as important parts of a healthy economy.
- Poverty and systemic inequality were noted as root causes of economic stability.
- Community members also noted that economic strain negatively impacts their mental health.



*A healthy community is where quality, affordable housing is available and people take pride in their neighborhood.*

A healthy community is where quality, affordable housing is available and people take pride in their neighborhood.

## Arapahoe County



### Key Insights

- Community members and partners reported that finding affordable housing is a significant problem facing their communities.
- The cost of housing is outpacing wages in Arapahoe County.
- Persons of color are disproportionately impacted by the affordable housing shortage.
- There were more than three times the amount of persons experiencing homelessness in 2021 compared to 2020.

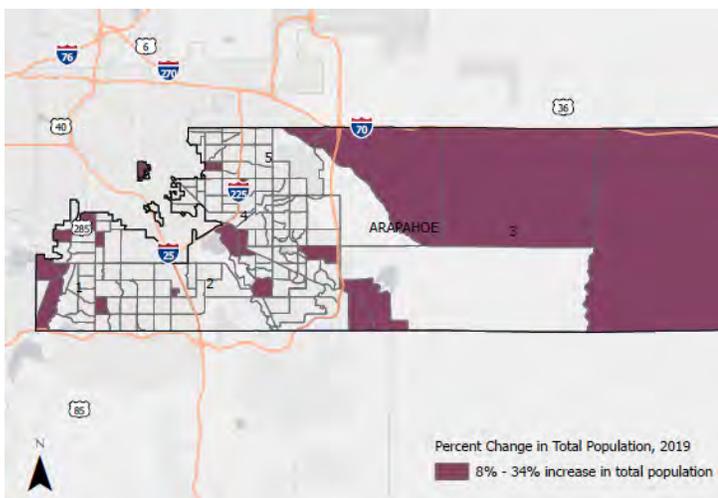
### Arapahoe County Median Home Sale Price January 2022

**\$485,000**  
**+17.1% since 2021**

<sup>1</sup> <https://www.redfin.com/county/363/CO/Arapahoe-County/housing-market>

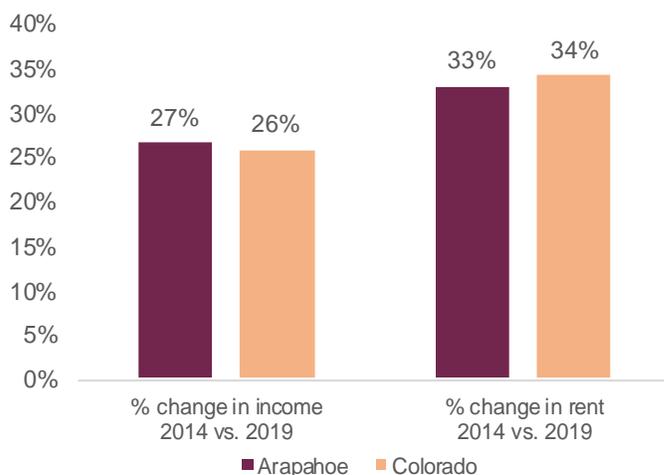
Our community members and partners reported that finding affordable housing is a significant problem facing their communities and a key factor in a healthy, happy, thriving community. As of January 2022, Arapahoe County has seen a 17.1% increase in median home sale price compared to January 2021.<sup>1</sup> Prior to the COVID-19 pandemic, Arapahoe County's growing population (Map 1) and limited housing continued to exacerbate the affordable housing shortage. Between 2014 and 2019, the median monthly household income for residents in Arapahoe County increased 27% while the median monthly rent increased 33%: the cost of housing is outpacing the increase in wages (Figure 1). These issues have only intensified since the COVID-19 pandemic with historic increases in unemployment, stable or even declining wages, and limited availability of affordable housing.

**Map 1: Census tracts with an 8% or more increase in total population from 2017 to 2019**



Source: U.S. Census, American Community Survey 5-Year Estimates 2017, 2019

**Figure 1: Percent change in average monthly income and average monthly rent costs between 2014 and 2019**



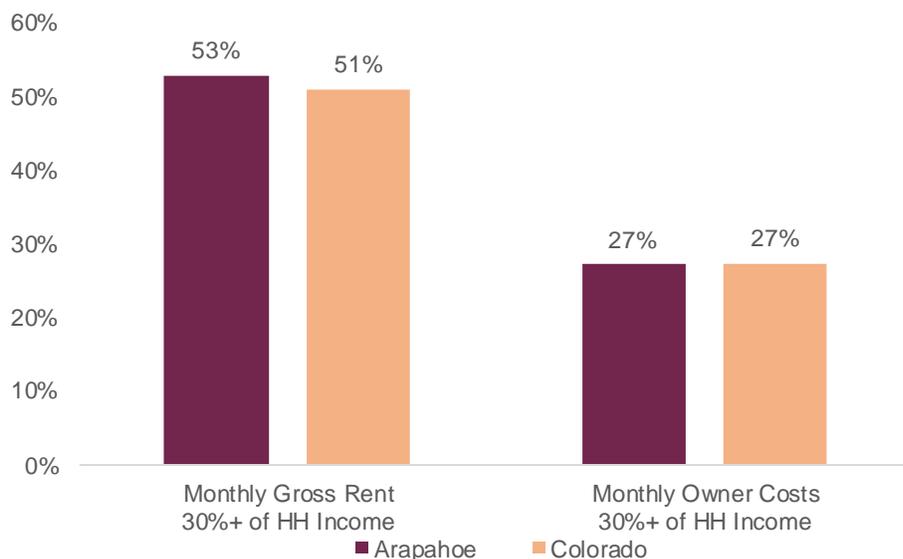
Source: U.S. Census, American Community Survey 5-Year Estimates 2014, 2019

**“We need increased collaboration but without affordable and attainable housing that is available to our front-line workforce, more services will not get us to the end goal we desire.”**

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

A standard first promoted by the United States National Housing Act of 1937, and still in use today, is that households should not spend more than 30% of their income on rent or a mortgage, leaving enough remaining income to cover non-housing-related needs, such as food and transportation costs. Households spending more than 30% of their income on rent or a mortgage are considered cost burdened and tend to reduce other essential expenses, such as health care or food, to make ends meet. As shown in Figure 2, 53% of renters in Arapahoe County spend more than 30% of their monthly income on rent; less than one-third of home owners spend above the 30% recommended standard. However, as housing costs rise and supply diminishes, more home owners will spend larger percentages of their income on mortgages.

**Figure 2: Comparison of renters and home owners paying 30% or more of household income on housing, 2019**



Source: U.S. Census, American Community Survey 5-Year Estimates 2019

**“The notion that decent housing is a luxury rather than a right presents a fundamental threat to health and social equity.... Paramount to achieving health equity is recognizing housing as an important source of health and well-being, not just among stakeholders in public health, but also in the multi-sectorial fields that intersect with housing.”**

Source: “Housing as a determinant of health equity: A conceptual model.” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7146083/>

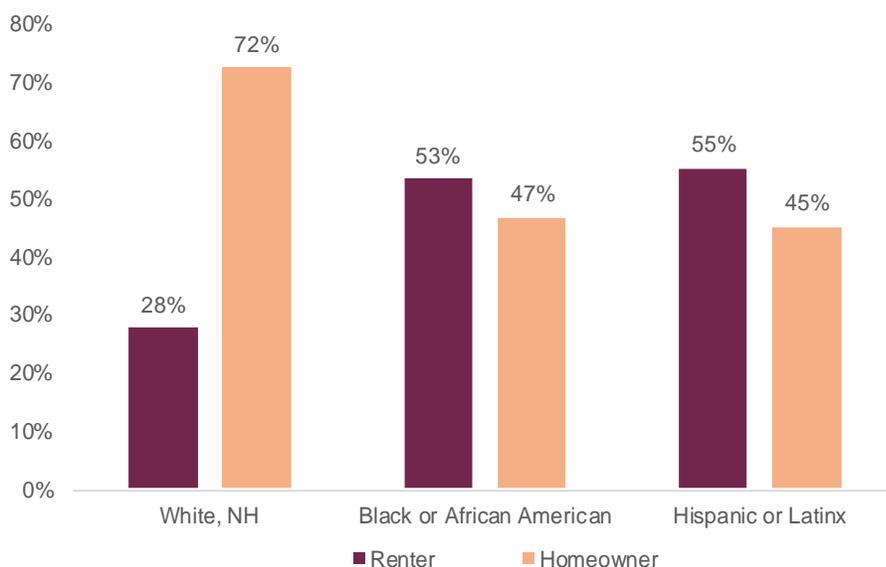


## In Tri-County’s community survey, housing was often mentioned by community members as a basic human need, along with food, clothing, and access to health care.

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

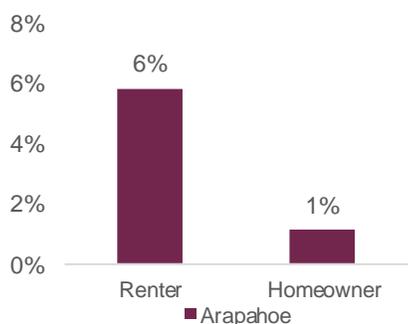
Low-income residents and communities of color experience a higher prevalence of substandard housing. In urban areas, this can be a result of historic redlining (a practice where banks refused to grant home loans in certain neighborhoods based on racial or ethnic composition) which was allowed by the Federal Housing Administration until the 1960’s. Neighborhoods of color were systematically denied access to government-backed home mortgages.<sup>2</sup> This and other policies affecting economic and educational opportunities had generational impacts on economic prosperity, which continue to this day (see Figure 3). In Arapahoe County, of occupied housing units by Black/African American and Hispanic or Latinx persons, fewer than 50% are homeowners. However, of occupied housing units by White, Non-Hispanic/Latinx persons, 72% are homeowners.

**Figure 3: Percent of occupied housing units, by tenure and race/ethnicity, Arapahoe County, 2019**



Source: U.S. Census, American Community Survey 5-Year Estimates 2019

**Figure 4: Percent of households with more than one occupant per room, by tenure, Arapahoe County, 2019**



Source: U.S. Census, American Community Survey 5-Year Estimates 2019

High housing costs may result in overcrowding. As shown in Figure 4, renters in Arapahoe County are six times more likely to have more than one occupant per room than homeowners. Research suggests that overcrowding can have a negative impact on children’s wellbeing and can cause stress for household members. Children may be particularly vulnerable to overcrowding because they use the space in the home to play, do homework, interact with family members, develop an identity, practice skills, and sleep.<sup>3</sup> The COVID-19 pandemic has compounded the amount of time children spend at home, increasing their vulnerability to poor housing quality by attending school from home and mandating quarantining or isolation. As shown in Figure 3, more than half of Black/African American and Hispanic or Latinx households are renters, exemplifying how communities of color may be at higher risk for overcrowding living.

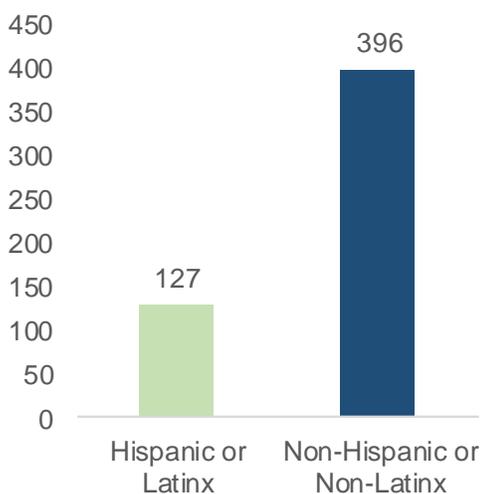
<sup>2</sup> [https://www.federalreserve.gov/boarddocs/supmanual/cch/fair\\_lend\\_fhact.pdf](https://www.federalreserve.gov/boarddocs/supmanual/cch/fair_lend_fhact.pdf)  
<sup>3</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3805127/>

**“There is an inadequate amount of services for the homeless community, low-income housing, and affordable housing.”**

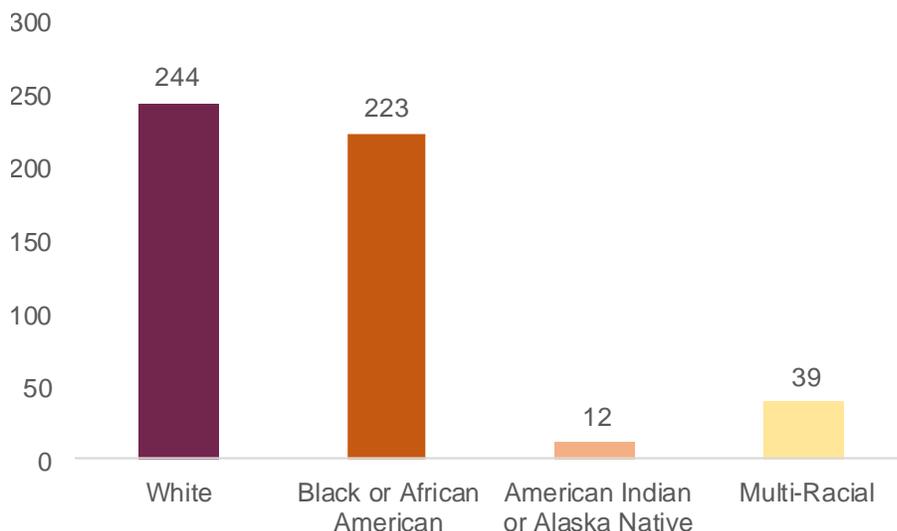
Source: Tri-County Health Department, CHA Community Engagement Process, 2021

Homelessness can be both a result of poor health as well as a cause of poor health outcomes. Health issues may lead to the inability to work, high medical bills, and exhaustion of savings which could result in homelessness. People who are experiencing homelessness are exposed to adverse conditions creating stress, which may lead to or worsen existing substance abuse and mental health issues. TCHD community members and partners mentioned the increase in homelessness as a key problem in the community. Each year, the Metro Denver Homeless Initiative conducts a point-in-time survey to estimate the number of people experiencing homelessness in the region. In Arapahoe County, there were more than three times the number of people experiencing sheltered homelessness in 2021 (n=523) compared to 2020 (n=158). Figure 6 shows the number of persons experiencing sheltered homelessness in Arapahoe County by ethnicity in 2021; Figure 7 shows the number of persons experiencing sheltered homelessness in Arapahoe County by race in 2021. Persons of color make up a higher percentage of the population experiencing sheltered homelessness than they do the general population.<sup>4</sup>

**Figure 6: Persons experiencing homelessness, by Ethnicity, Arapahoe County, 2021**



**Figure 7: Persons experiencing homelessness, by Race, Arapahoe County, 2021**



<sup>4</sup> Point-in-Time Survey, Metro Denver Homeless Initiative, 2021



## Radon Test Results in Arapahoe County, 2005-2020:

**Total Tests: 12,789**

**Percent of homes above the recommended action limit: 48%**

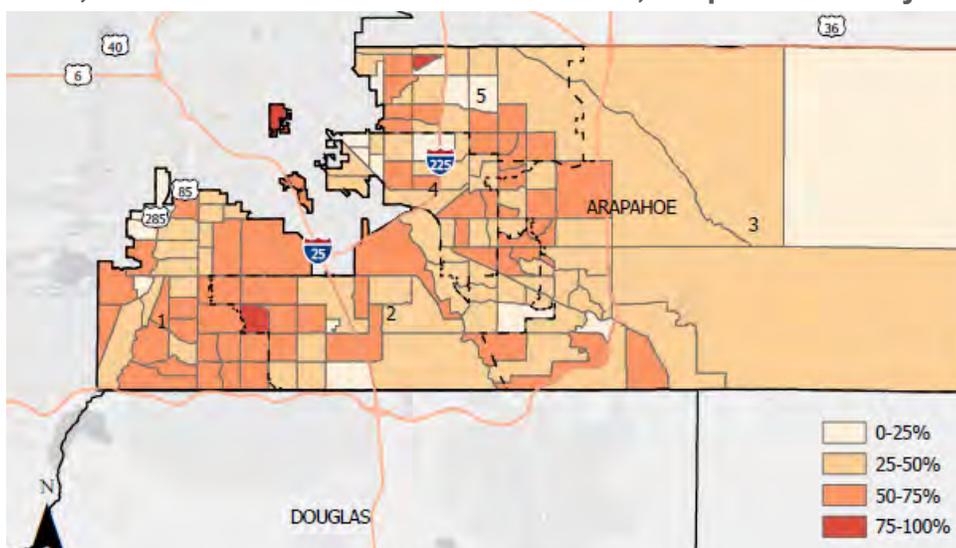
*Note: 4 pCi/L is the recommended action level established by the U.S. EPA*

Source: Radon Outreach Program, Colorado Department of Public Health and Environment

Poor housing conditions are associated with a wide range of health conditions, including respiratory infections, asthma, lead poisoning, injuries, and poor mental health. The quality of housing includes structural soundness, handicap accessibility, and indoor air quality.

Housing can be a source of exposure to various carcinogenic air pollutants. Radon, a colorless, odorless radioactive gas that forms naturally in soil, is the second leading cause of lung cancer in the United States. Radon is common throughout Colorado and in Arapahoe County (Map 2). Radon is measured in units of picocuries per liter (pCi/L) of air. The EPA recommends a radon reduction plan if radon levels are at or above 4 pCi/L. Testing homes for radon and mitigating exposure in settings with elevated levels can reduce the risk of lung cancer from radon exposure. Radon mitigation is available but may be too expensive for some families to afford.

**Map 2: Home radon tests above the recommended action limit, tested for radon between 2006-2020, Arapahoe County**



Source: Radon Outreach Program, Colorado Department of Public Health and Environment, 2006-2020

Where we live is directly connected to our health and safety. Without adequate housing, people have trouble managing their daily lives. For most people, housing is their greatest monthly expense. Quality, affordable housing is central to individual and community wellbeing.

## What Our Community Said

- Housing was often mentioned as a basic human need, along with food, clothing, and access to health care.
- Availability of affordable housing was the most often mentioned concern and a key factor in a healthy, happy, thriving community.
- Issues related to housing were vast, and included affordability, cleanliness, quality, and safety.
- Built environment, including walkability, accessibility to safe parks and open spaces, well-lit and safe neighborhoods, were also noted as important parts of a healthy community.



*A healthy community is where lifelong learning is encouraged, and quality educational opportunities are available for all residents across the lifespan, meeting their needs and setting them up for success.*

 Tri-County Health Department | 2022 Community Health Assessment  
Arapahoe County, Colorado

*A healthy community is where lifelong learning is encouraged, and quality educational opportunities are available for all residents across the lifespan, meeting their needs and setting them up for success.*

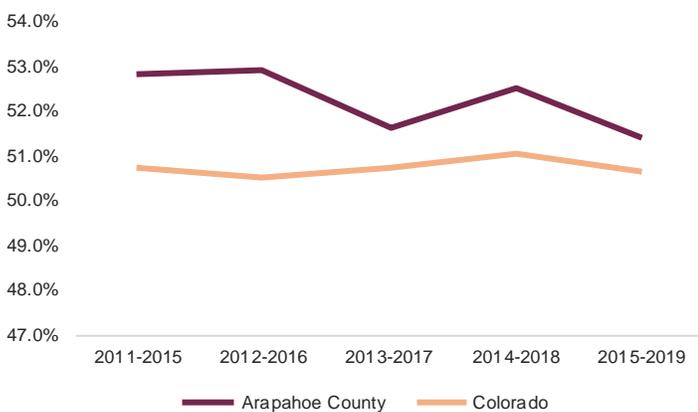
**Arapahoe County**



## Key Insights

- Education increases employment opportunities for community members which, in turn, impacts income and the likelihood of having employer-sponsored health insurance as well as other benefits that impact health and wellbeing.
- High school completion varies not only by district, but also by the characteristics of the students, the obstacles they face, and the situations of their lives.
- Education can also impact one’s health literacy, ability to navigate the health care system, and the confidence and determination it can take to do so successfully.

**Figure 1: Percent of Children Ages 3 and 4 Enrolled in Preschool, 5-year rolling averages**



Source: U.S. Census Bureau, American Community Survey 5-Year Estimates

<sup>1</sup> <https://law.justia.com/constitution/colorado/cnart9.html>  
<sup>2</sup> [http://www.coloradotrust.org/content/story/almost-half-coloradans-live-child-care-deserts?utm\\_source=Master&utm\\_campaign=5569a4c1fe-EMAIL\\_CAMPAIGN\\_2018\\_02\\_15&utm\\_medium=email&utm\\_term=0\\_4c1f5e929a-5569a4c1fe-146464645](http://www.coloradotrust.org/content/story/almost-half-coloradans-live-child-care-deserts?utm_source=Master&utm_campaign=5569a4c1fe-EMAIL_CAMPAIGN_2018_02_15&utm_medium=email&utm_term=0_4c1f5e929a-5569a4c1fe-146464645)

Education provides us with the knowledge, skills, and reasoning we need to navigate the world around us. Learning stimulates human beings’ natural curiosity and provides us with the skills to explore new ideas, find meaning in complexities, and derive independent conclusions from facts. Education is deemed so important it is mandated by law. Article 9, Section 2 of the Colorado State Constitution requires “the establishment and maintenance of a thorough and uniform system of free public schools throughout the state, wherein all residents of the state, between the ages of six and twenty-one years, may be educated gratuitously.”<sup>1</sup>

Starting early is important. Research has found that “attending high-quality early childhood programs, such as preschool or Head Start, can help reduce significant disparities in achievement and development for children in poverty or from other disadvantaged backgrounds. High-quality child care has even been linked to better overall physical health in adults who participated in it as children. What’s more, access to child care can help parents,

*A healthy community is where lifelong learning is encouraged, and quality educational opportunities are available for all residents across the lifespan, meeting their needs and setting them up for success.*

## Arapahoe County

### Educational attainment is associated with greater social support, including social networks that provide financial, psychological, and emotional support.

Source: Understanding the Relationship Between Education and Health: A Review of the Evidence and an Examination of Community Perspectives. Content last reviewed September 2015. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html>

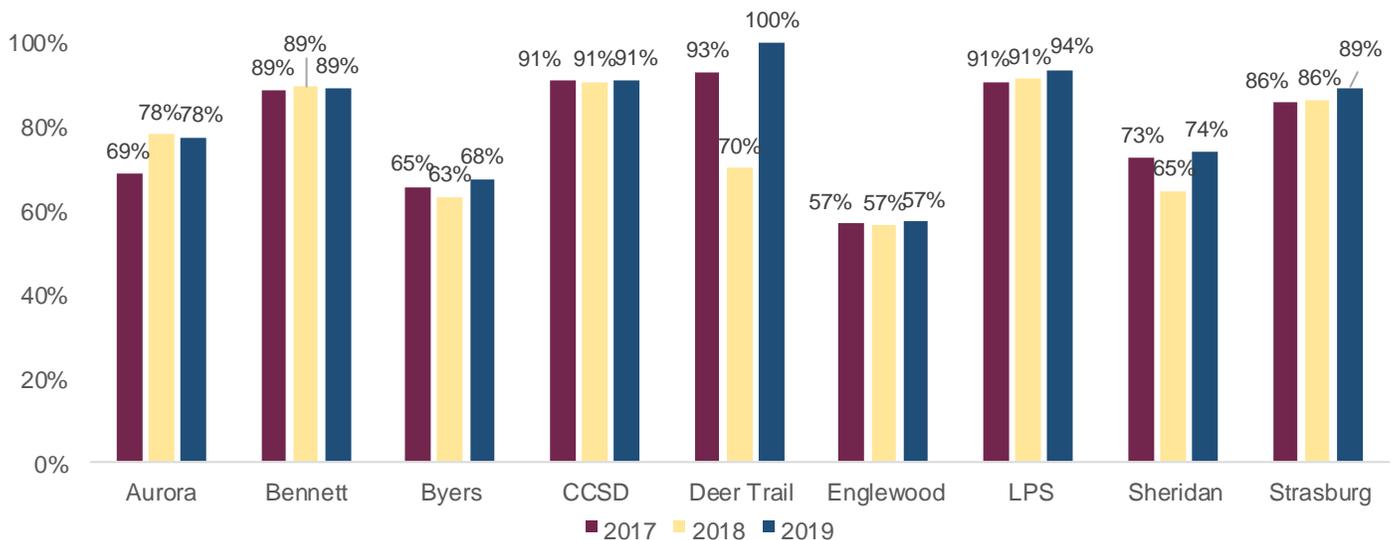
especially mothers, access job and educational opportunities that can ultimately aid their own health and that of their families.”<sup>2</sup> Figure 1 shows recent trends in percentage of 3- and 4-year-olds enrolled in preschool.

The Colorado General Assembly created the Colorado Preschool Program (22-28-102 C.R.S) in 1988 to serve the young children in Colorado who were most vulnerable to starting grade school unprepared. The legislature recognized that providing quality early childhood education would reduce dropout rates, put children on track to reach their full potential, reduce need for public assistance, and decrease the risk for future criminal activities.<sup>3</sup> Each slot provides a half-day of preschool for one child. This program is funded through the Colorado Public School Finance Formula.

Formal educational attainment is one benchmark of learning and is often a requirement for certain professions. The majority of students in Arapahoe County complete high school. High school completion is the number of students receiving a regular diploma plus those completing with a non-diploma certificate or GED within a certain number of years after entering 9th grade. Figure 2 shows four-year completion rates over time by school district.

Completion rates vary by student characteristics, including race and ethnicity, English proficiency, socioeconomic status, and persons with disabilities (Figure 3). Poverty is much more common among minorities as neighborhoods tend to be segregated by race and income. Low-income neighborhoods often have schools that tend to be poorly resourced by low property taxes; voters may be less likely to support bonds for school funding due to lack of personal resources. This can result in the inability to offer attractive teacher salaries or properly maintain buildings, supplies, and school safety.

**Figure 2: Trends in 4-year High School Completion Rates by School District, Arapahoe County, 2017-2019**



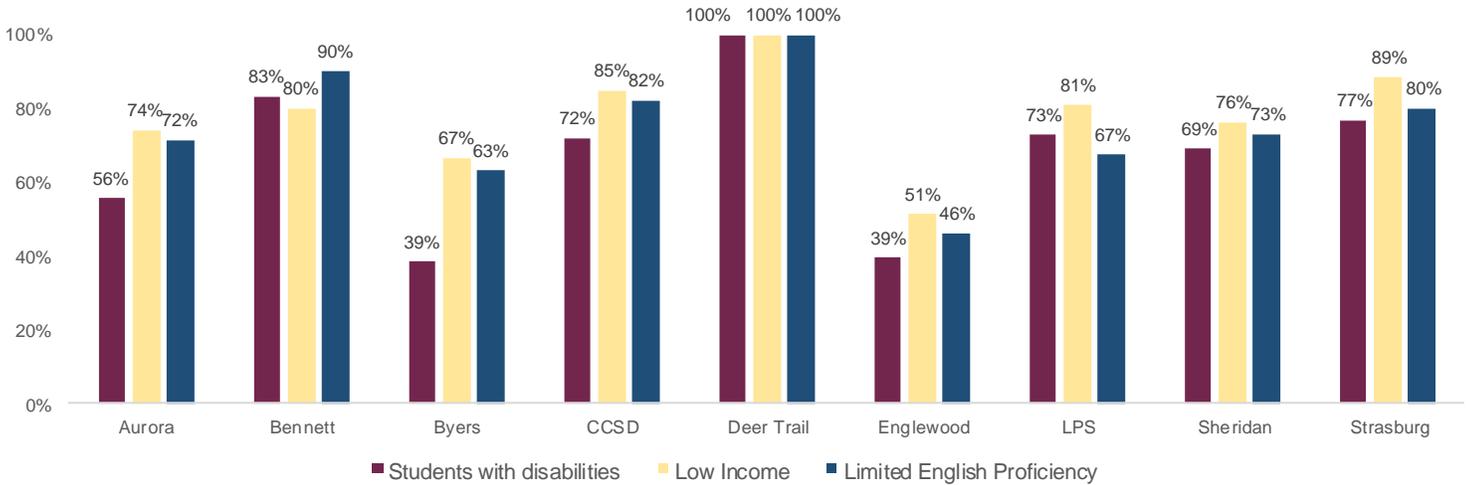
Source: Colorado Department of Education  
LPS: Littleton Public Schools, CCSD: Cherry Creek School District

<sup>3</sup> <https://www.rwjf.org/en/library/research/2012/12/why-does-education-matter-so-much-to-health-.html>

A healthy community is where lifelong learning is encouraged, and quality educational opportunities are available for all residents across the lifespan, meeting their needs and setting them up for success.

Arapahoe County

**Figure 3: Four-Year High School Completion, by Student Characteristics and District, Arapahoe County, class of 2019**



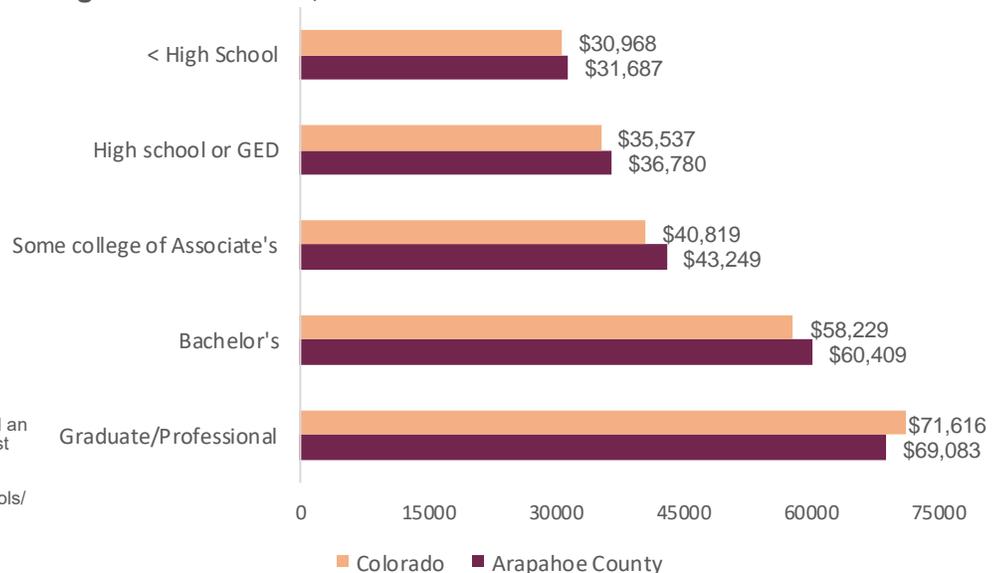
Source: Colorado Department of Education

The link between education and income is well established. College graduates earn nearly twice as much as high school graduates over a lifetime (Figure 4). Higher-educated individuals are also more likely to have a job—one with healthier working conditions, better health insurance, and higher wages.<sup>4</sup> A talented workforce attracts and retains employers, impacting local economies. A sustainable economy demands the trained human capital to support it. Individuals and families are more likely to achieve and maintain self-sufficiency if they are well-prepared for the jobs that pay a living wage and provide health insurance and other benefits.

**“The economic vulnerability that can arise from an inadequate education can affect health through a cascade effect on the ability to acquire resources that are important to health (e.g., food, stable housing, transportation, insurance, and health care).”**

Source: Understanding the Relationship Between Education and Health: A Review of the Evidence and an Examination of Community Perspectives. Content last reviewed September 2015. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html>

**Figure 4: Median Annual Income by Educational Attainment, Adults Ages 25 and Older, 2019**



Source: American Community Survey 1-Year Estimate 2019

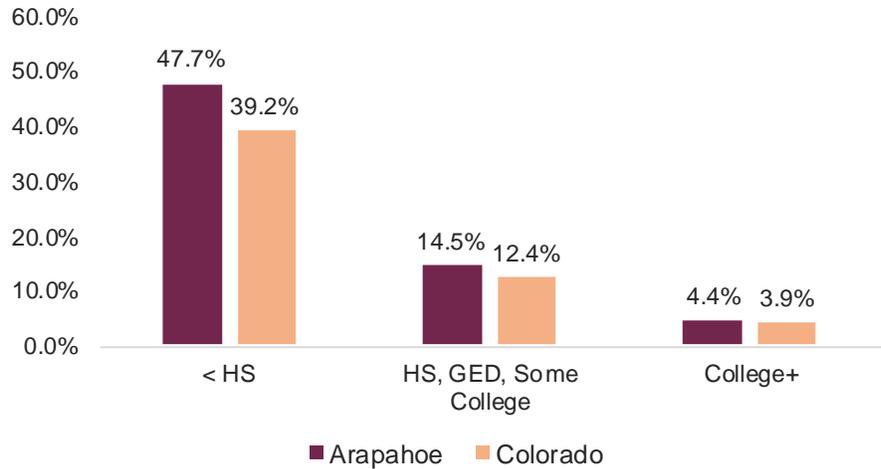
A healthy community is where lifelong learning is encouraged, and quality educational opportunities are available for all residents across the lifespan, meeting their needs and setting them up for success.

Arapahoe County

**“Individuals with lower health literacy had poorer health-related knowledge and comprehension, ability to demonstrate taking medications properly, and ability to interpret medication labels and health messages. They also had increased hospitalizations and emergency care, decreased preventive care, and, among the elderly, poorer overall health status and higher mortality.”**

Source: Understanding the Relationship Between Education and Health: A Review of the Evidence and an Examination of Community Perspectives. Content last reviewed September 2015. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html>

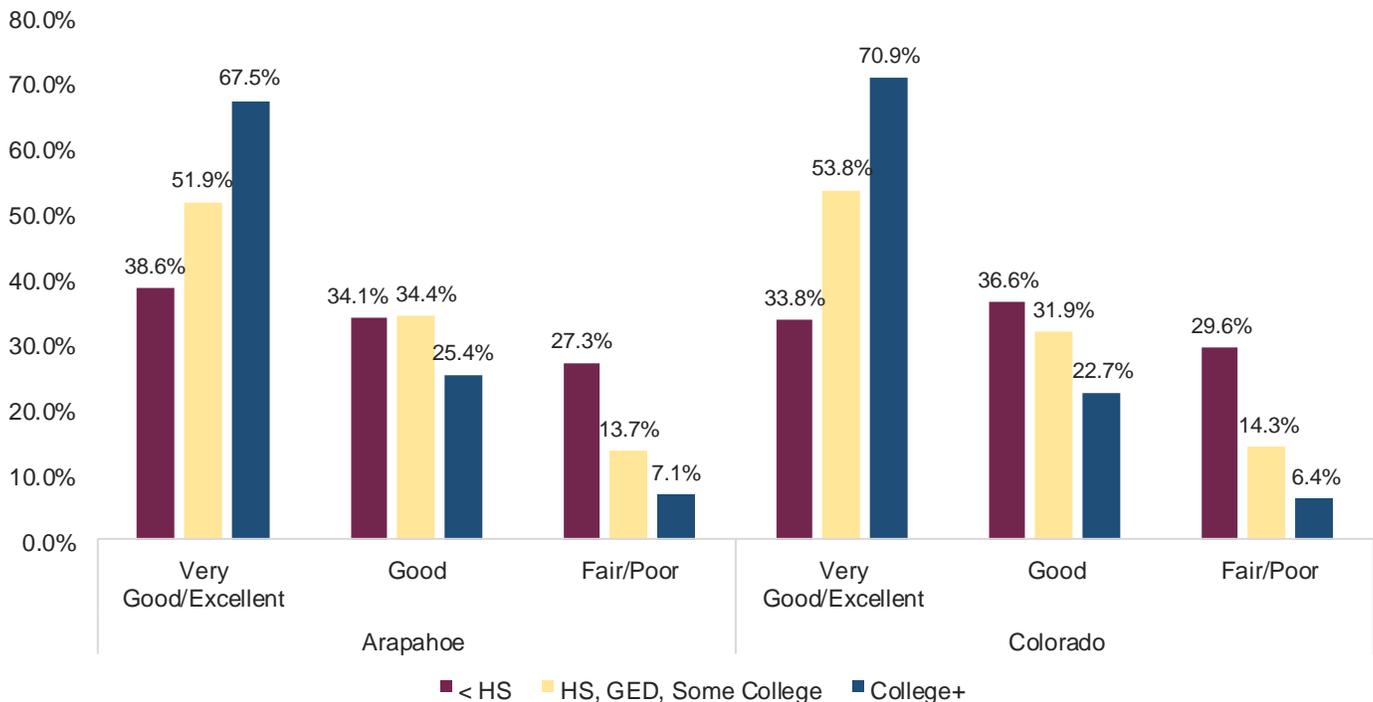
**Figure 5: Adults with no health insurance coverage by educational attainment, 2018-2020**



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

Educational attainment is correlated with a range of health issues. For example, self-rated health status has been linked to mortality; those who rate their general health status as fair or poor die earlier than those who rate their health more favorably.<sup>5</sup> Fair or poor health status is also linked to chronic disease prevalence. This measure of health is correlated with educational attainment; the less education one has, the more likely they are to rate their health as fair or poor.

**Figure 6: Self-Reported General Health Status by Educational Attainment, 2018-2020**



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

<sup>5</sup>Idler EL, Benyamini Y. Self-rated health and mortality: a review of twenty-seven community studies. J Health Soc Behav. 1997 Mar;38(1):21-37.

*A healthy community is where lifelong learning is encouraged, and quality educational opportunities are available for all residents across the lifespan, meeting their needs and setting them up for success.*

**Arapahoe County**

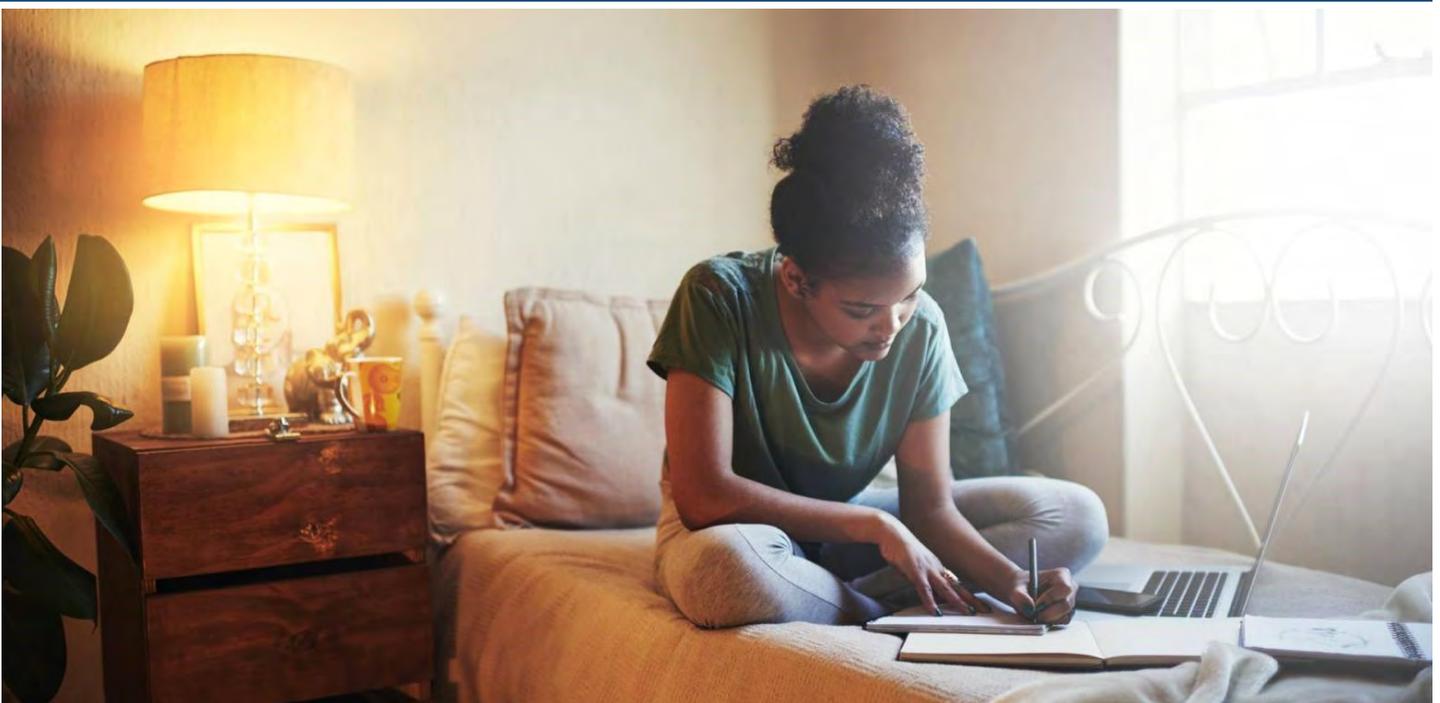
Research also shows that education, learning, and curiosity throughout the lifespan can decrease one's risk of developing dementia or cognitive decline. The Alzheimer's Association believes that lifelong learning/ cognitive training, healthy diet, regular physical activity, and management of cardiovascular risk factors may reduce the risk of cognitive decline as people age.<sup>6</sup>

Lifelong learning—that is, the opportunity to continue to acquire the knowledge, values, skills and understanding needed to participate fully in community life—has many benefits. It keeps the mind sharp and improves memory, helps individuals gain confidence, enhances interpersonal relationships, improves chances of career growth, and increases the ability to communicate. Providing formal and informal opportunities for all residents to learn throughout their lives enhances the health of individuals and communities.

<sup>6</sup> [https://www.alzheimersanddementia.com/article/S1552-5260\(15\)00197-1/pdf](https://www.alzheimersanddementia.com/article/S1552-5260(15)00197-1/pdf)

## What Our Community Said

- Of all comments from the community, 3.4% related to education.
- Of these, half (52.4%) related to lack of information or the provision of accurate health information.
- Most of the remaining comments (44.5%) related to the educational system.
- Community members mentioned wanting information and education, in different languages, on various health topics, including health services, nutrition, health system navigation, medical coaching.
- Low-cost education and training was also mentioned as needs to help create a more skilled workforce and increase employment opportunities





*A healthy community is where all residents can access safe, healthy, and culturally-appropriate food and are able to practice good eating habits.*

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 Tri-County Health Department | 2022 Community Health Assessment  
Arapahoe County, Colorado



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**Arapahoe County**



## Key Insights

- In 2020, approximately 1 in 8 people were food insecure in Arapahoe County.
- In 2020, 16.5% of children were considered food insecure in Arapahoe County.
- As a result of COVID-19, 63% of the Women, Infants, and Children Program (WIC) clients in Colorado stated they experienced household food insecurity.
- There is a higher density of food deserts in minority neighborhoods in Arapahoe County compared to White, Non-Hispanic neighborhoods.

**In 2020, middle-income households spent an average of \$6,300 on food, representing 11% of their income, while the lowest income households spent \$4,099 on food, representing 31% of their income.**

Source: USDA, Economic Research Service using data from U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, 2020

Eating a nutritious diet is an important part of good overall health; however, in reality, healthy eating is complicated by many factors, including one's stage of life, circumstances, knowledge and attitudes, preferences, access to food, culture, and traditions. Eating nutritiously is a challenge for many people and families, and accessing healthy foods became even more challenging during the COVID-19 pandemic. Not only did lockdown restrictions make it more difficult for people to get to the grocery store, but rising unemployment, school closures, limited access to in-school food, and product scarcity added additional challenges. This combination of factors increased food insecurity across the country.<sup>1</sup> The health benefits of a nutritious diet, however, are clear. Adequate nutrition helps keep bodies functioning, improves maternal health, improves child health and their ability to concentrate, and reduces the risk for many health conditions like diabetes, heart disease, and some cancers.<sup>2</sup>

Food insecurity is defined as “the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).”<sup>3</sup>

A key factor in healthy eating is access to affordable, nutritious food. As with housing, those with lower incomes face particular challenges affording food and other necessities. Retail food prices rose 6.3% from December 2020 to December 2021.<sup>4</sup> The increased price of food

<sup>1</sup> Feeding America (2020). Food insecurity in the United States Feeding America. <https://map.feedingamerica.org/>

<sup>2</sup> World Health Organization (2020). Healthy diet. <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>

<sup>3</sup> Life Sciences Research Office, S.A. Andersen, ed., "Core Indicators of Nutritional State for Difficult to Sample Populations," *The Journal of Nutrition* 120:1557S-1600S, 1990.)

<sup>4</sup> Hunger Free Colorado (2021). Statewide Food Insecurity Survey



A healthy community is where all residents can access safe, healthy, and culturally-appropriate food and are able to practice good eating habits.

Arapahoe County

**“Poder obtener alimentos saludables a bajo costo que muchas veces tendemos a comprar la comida más económica sin tener prioridad que tan saludable es.”**

*“Being able to obtain healthy, low-cost food; often we have to buy the cheapest food without prioritizing how healthy it is.”*

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

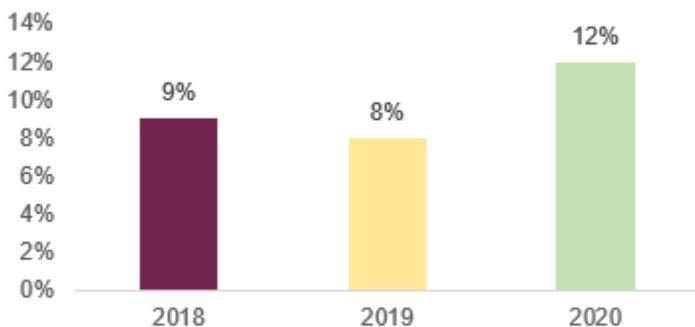
combined with job loss due to COVID-19 impacted families in Arapahoe County. In fact, approximately 1 in 8 people (12%) were food insecure in 2020 compared to 8% in 2019 (Figure 1).

Women play a large role in food production and preparation and because of their roles as child bearers and caregivers, women are especially impacted by food insecurity. Food insecurity has been associated with poor pregnancy outcomes, including low birth weight and gestational diabetes. Stress, anxiety, and depression in pregnant women have also been correlated with household food insecurity.<sup>5</sup> In 2019, nearly 1 in 12 (8%) pregnant women in Arapahoe County were considered food insecure (Figure 2).

Children are especially vulnerable to food insecurity due to the importance of key nutrients for brain development and body functioning and growth. Research tells us that food-insecure children are more likely to be developmentally delayed, have higher rates of behavioral problems, and are in poorer general health than children who are not food insecure. Food insecurity is also associated with childhood obesity due to poorer quality diets and overeating related to unpredictable availability of food.<sup>6</sup> Good nutrition of children is vital for the energy and focus necessary to fully participate in school, whether remote or in-person. In 2019, nearly one in five high-school-aged youth (18%) were food insecure in Arapahoe County (Figure 2). In 2020, 16.5% of children in the county were considered food insecure compared to 11% in 2019.

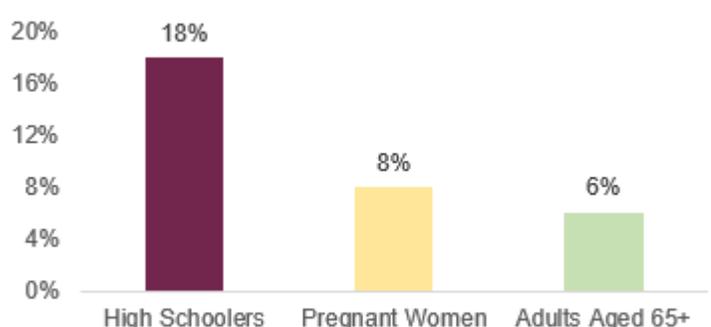
Adults aged 65 years and older face a number of unique challenges, often related to health, mobility, or limited income, that put them at a greater risk of hunger. Many are forced to choose between buying food or medicine, and others struggle to access food without reliable transportation. Food-insecure seniors are 53% more likely to report a heart attack, 52% more likely to develop asthma, and 40% more likely to report an experience of congestive heart failure than seniors who are not food insecure. They are also 60% more likely to experience depression, reducing their overall quality of life.<sup>7</sup> In 2019, 6% adults age 65 and above were food insecure in Arapahoe County (Figure 2).

**Figure 1: Food insecurity, Arapahoe County, 2018-2020**



Source: Feeding America (2021)

**Figure 2: Food insecurity in vulnerable populations, Arapahoe County, 2019**



Sources: Colorado Department of Public Health & Environment: Healthy Kids Colorado Survey (2019), Behavioral Risk Factor Surveillance System (2019) and Pregnancy Risk Assessment Monitoring System (2016-2019)

<sup>5</sup> Ivers, L. C., & Cullen, K. A. (2011). Food insecurity: special considerations for women. *The American Journal of Clinical Nutrition*, 94(6), 1740S–1744S. <http://doi.org/10.3945/ajcn.111.012617>

<sup>6</sup> [https://www.childtrends.org/wp-content/uploads/2016/12/117\\_Food\\_Insecurity-1.pdf](https://www.childtrends.org/wp-content/uploads/2016/12/117_Food_Insecurity-1.pdf)

<sup>7</sup> <http://www.feedingamerica.org/research/senior-hunger-research/or-spotlight-on-senior-health-executive-summary.pdf> As the baby boomer generation ages, there will be an ever increasing number of seniors in our communities, many of whom will struggle with food insecurity

*A healthy community is where all residents can access safe, healthy, and culturally-appropriate food and are able to practice good eating habits.*

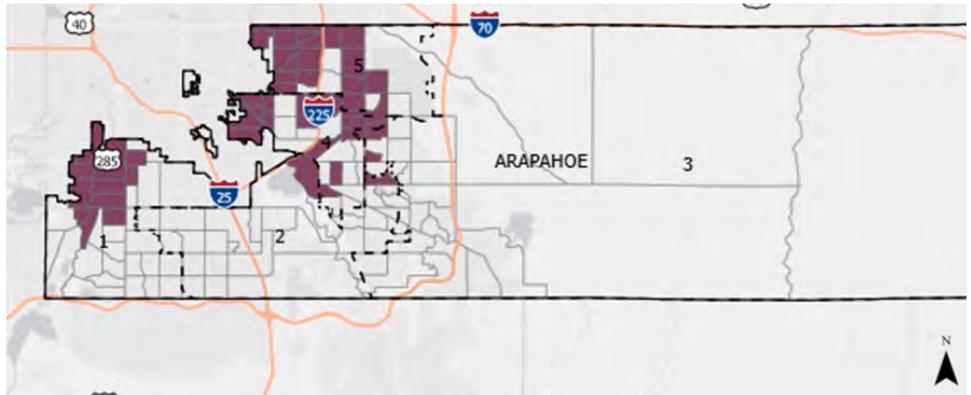
**Arapahoe County**

**In response to a Tri-County Health Department community survey, food access and food insecurity comprised the majority (43%) of food-related comments.**

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

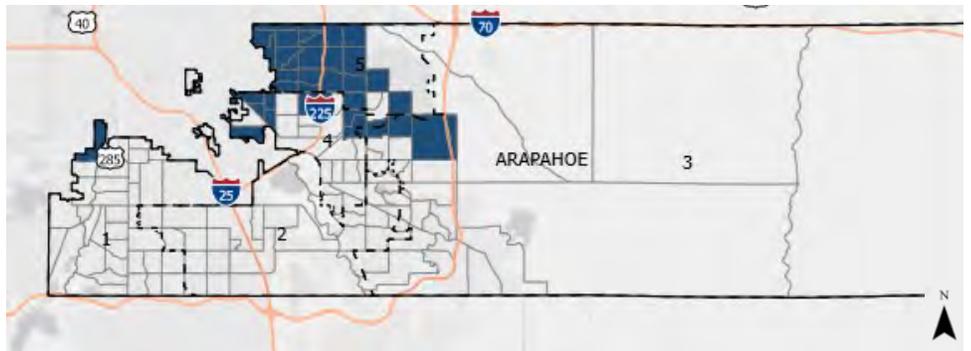
The United States Department of Agriculture (USDA) defines food deserts as areas lacking access to fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished communities. This is largely due to a lack of nearby grocery stores, farmers’ markets, and healthy food providers. Instead, these areas tend to have local convenience stores that provide processed foods high in sugar and fat and very few, if any, fresh fruits and vegetables. Food deserts can be defined in multiple ways depending on characteristics of the population. USDA Food Access data account for multiple conditions that may affect an individual’s ability to access healthy foods. Map 1 indicates the census tracts where proximity to a food retailer and/or household income (at the census-tract level) pose obstacles to accessing healthy food. Furthermore, Johns Hopkins University reports that food deserts are more abundant in minority neighborhoods.<sup>8</sup> Map 2 shows the census tracts where the highest quartile (top fourth) of population is minority race and/or Hispanic/Latinx. Comparing Map 1 and Map 2 indicates that minority race and/or Hispanic/Latinx communities live in census tracts that are considered food deserts.

**Map 1: Food deserts: Low income and low access at 0.5 and 10 miles,\* Arapahoe County, 2019**



Source: USDA Food Access Research Atlas (2019)  
 \*This map uses criteria developed by United States Department of Agriculture (USDA), which looks at low-income census tracts where a significant number (at least 500 people) or share (at least 33%) of the populations is greater than 1/2 miles from the nearest supermarket, supercenter, or large grocery store for an urban area or greater than 10 miles for a rural area.  
 \*\*The dotted lines indicate board of county commissioner districts

**Map 2: Percent of population: Minority race and/or Hispanic/Latinx, highest quartile, Arapahoe County, 2019**



<sup>8</sup> Johns Hopkins Magazine (2014). <https://hub.jhu.edu/magazine/2014/spring/racial-food-deserts/>

Source: U.S. Census, American Community Survey 5-Year Estimates, 2019



*A healthy community is where all residents can access safe, healthy, and culturally-appropriate food and are able to practice good eating habits.*

**Arapahoe County**

## Community members appreciate programs like WIC, food pantries, and farmers' markets that increase access to affordable food.

Source: Tri-County Health Department, CHA Community Engagement Process, 2021



Two federal nutrition programs: the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provide assistance to low-income families for the purchase healthy foods, among other services. Unfortunately, not all those who are eligible for these benefits are enrolled in these programs. Not only would increasing SNAP and WIC enrollment help families access healthy food, but it would generate local economic activity from grocery store sales and result in a high return on investment in improved health outcomes and reduced health care costs.<sup>9</sup> The number of Colorado families experiencing food insecurity was exacerbated by the COVID-19 pandemic; however, at the same time, there was a decrease in SNAP and WIC enrollment across the state.<sup>10</sup> In coordination with the National WIC Association (NWA), Colorado distributed an online survey to their WIC clients about their experience during the COVID-19 pandemic. The majority (63%) of WIC clients in Colorado stated they experienced household food insecurity as a result of the pandemic.<sup>11</sup> From 2019-2021, the number of Arapahoe County families who applied for and received SNAP assistance grew by 29%, totaling 13.9 million dollars.<sup>12</sup>

Food insecurity persists in Arapahoe County, disproportionately impacting low-income and minority communities. Healthy, abundant food is critical for the growth and development of children. Good nutrition helps prevent the development of chronic diseases. Access to affordable, high quality, culturally-appropriate food is an important characteristic of a healthy community.

<sup>9</sup> Colorado Blueprint to End Hunger. <https://www.endhungerco.org/the-report/>  
<sup>10</sup> Colorado WIC Data Dashboard (2021). <https://www.coloradowic.gov/colorado-wic-data-dashboard>  
<sup>11</sup> CDPHE National WIC Association (2021). COVID-19 Client Survey Report  
<sup>12</sup> Colorado Department of Human Services (2020). SNAP Case, Client and Issuance reports.

## What Our Community Said

- Access to healthy, affordable food was one of the key issues most mentioned by community respondents, making up over 6% of total responses.
- Food access and food insecurity comprised the majority (43%) of food-related comments followed by healthy eating and nutrition (36%).
- Community members talked about having to balance the cost of food with other basic needs, such as housing, healthcare, and bills. As a potentially more flexible budget item, people may try to save money on food by buying less-healthy, cheaper foods.
- Community members appreciate programs like WIC, food pantries, and farmers' markets that increase access to affordable food.
- Respondents also noted the importance of culturally-appropriate food as well as the relationship between poor-quality food and obesity.



*A happy, healthy, and thriving community provides safe and clean outdoor spaces and living conditions, and is free from hazards or disease. A safe community is also free from crime, racism, and violence.*



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Arapahoe County

## Key Insights

- Fatal car crashes have been steadily increasing in Arapahoe County since 2010, despite high seat belt usage.
- Hospitalizations for falls continue to rise, exceeding hospitalizations for motor vehicle accidents, suicide or self-harm, and drug poisoning.
- Burglary, auto theft, and arson increased from 2019 to 2020, but not above historical (within the past 10 years) arrest rates.

## Safety in the Community

Safety is a key social determinant of health: a condition of the environment where people are born, live, learn, work, play, worship, and age that affects their health and quality of life.<sup>1</sup> In our recent community survey and focus groups, Arapahoe county partners and community members often mentioned safety as key to healthy, happy, and thriving communities. People want to and should feel safe at school, at work, outside, inside, on the road – everywhere.

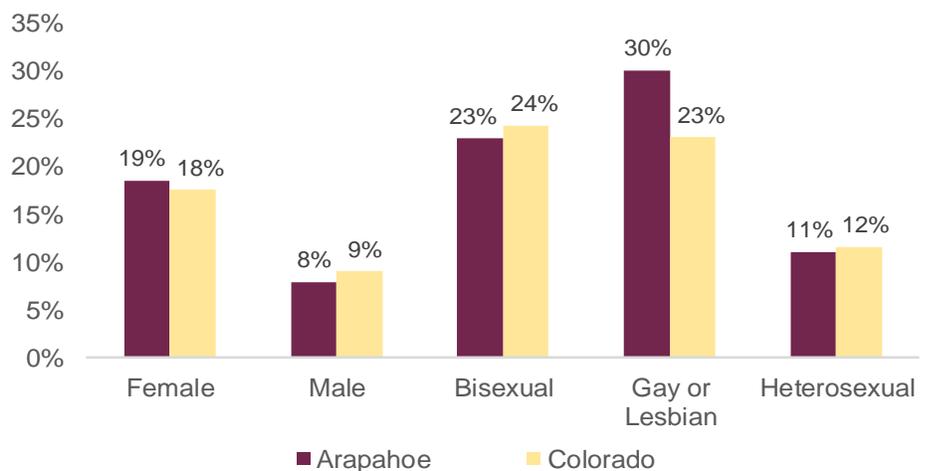
Our partners, community members, and staff believe safe living conditions, safe outdoor spaces, and communities free from disease, crime, and discrimination as necessary to maintain a happy, healthy, and thriving community. Among these participants, concerns about safety made up nearly one in twenty (4.2%) of comments from community members.<sup>2</sup> In addition to comments about safe town and cities, and safety or protection from disease, community members also mentioned the need to feel safe in different social setting and structures, such as knowing their neighbors and freedom from racism, bullying, and domestic violence.

## Safety in Schools

Children and youth should feel and be safe at home, school, and in the community. Most high school students in Arapahoe County (84%) report feeling safe at school; heterosexual/straight youth are significantly more likely than gay, lesbian or bisexual youth to report feeling safe at school. In Arapahoe County, 15% of youth report having been bullied on school property in the past year, compared to 17% in the state of Colorado. Consistently, more females and gay, lesbian, or bisexual youth report bullying, both on school property and online, than do males and heterosexual youth (Figure 1). Among students who were bullied or teased, Asian, Hispanic or Latinx, Black/African American, and multiracial students in Arapahoe County and across the state were more likely to be teased or called names because of their race/ethnicity.<sup>3</sup>



Figure 1: Percent of High School Students Reporting Online Bullying, Arapahoe County and Colorado, 2019



<sup>1</sup>Centers for Disease Control and Prevention. <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>

<sup>2</sup>Tri-County Health Department, CHA Community Engagement Process, 2021

<sup>3</sup>Colorado Department of Health and Environment, Healthy Kids Colorado 2019

Source: Healthy Kids Colorado 2019, Colorado Department of Public Health and Environment



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## Arapahoe County

### Impaired driver-related fatal crashes have steadily increased in Arapahoe County from 2010 to 2020.

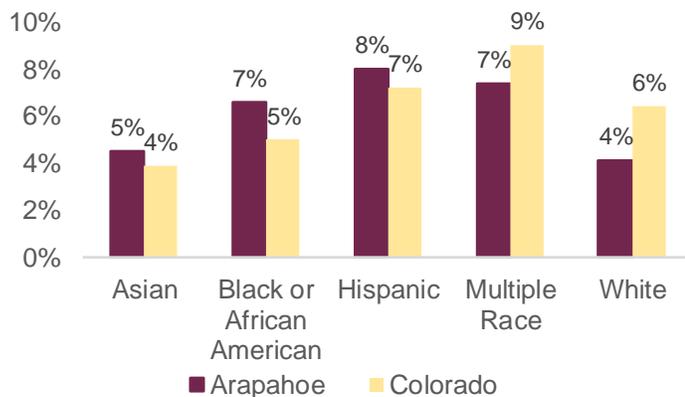
Source: Colorado Department of Transportation

Health behaviors also relate to safety. People are more likely to take risks with their health and health behaviors if they feel the need to prove themselves to their peers or if social norms around health behaviors encourage riskier behaviors. In Arapahoe County, fewer than one in ten (6%) high school students reported rarely or never wearing a seatbelt when riding in a car driven by someone else. Higher percentages of younger youth (15 years or younger), males, Hispanic, multiracial, and gay or lesbian youth reported rarely or never wearing a seat belt more than their older, female, White, Asian, and heterosexual or bisexual peers (Figure 2). Youth reporting riding in a car driven by someone who had been drinking alcohol was higher among female, Hispanic, multiracial, and gay or lesbian students. Older students, males, gay or lesbian students were more likely to drink and drive than their younger, female, White, Black, and heterosexual peers.<sup>3</sup>

### Motor Vehicle Safety

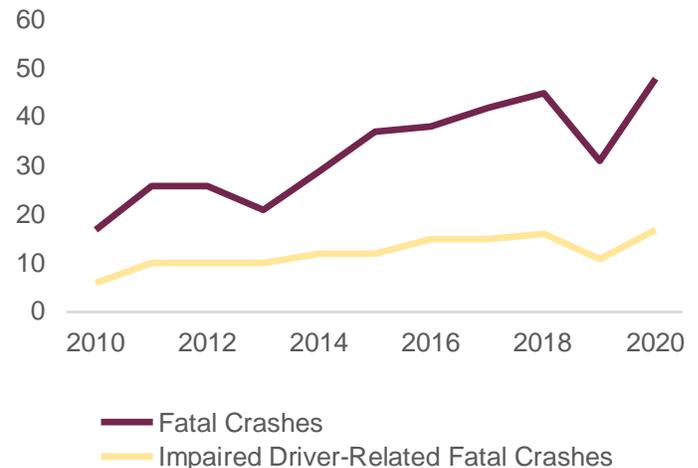
In 2020, there were 48 fatal car crashes in Arapahoe County, 17 (35%) of which involved impaired driving of some kind. Figure 3 shows a ten-year trend in number of total and impaired driving-related fatal car crashes in Arapahoe County. By counts alone, fatal accidents have generally risen over the last several years. However, population increases and changes in automobile traffic need to be considered to accurately assess the trend. Between 2010 and 2020, impaired driver-related fatal crashes have steadily increased in Arapahoe County.<sup>4</sup> In 2019, there were 36 crash-related fatalities, of which 14% involved no restraint or no helmet.<sup>5</sup> In a 2020 statewide seat belt usage study, Arapahoe County ranked second highest with an estimated seat belt usage rate of 92.5%.<sup>6</sup>

Figure 2: Percent of High School Students who Never or Rarely Wore a Seatbelt When Riding in a Car Driven by Someone Else, 2019



Source: Healthy Kids Colorado 2019, Colorado Department of Public Health and Environment

Figure 3: Fatal Car Crashes, Arapahoe County, 2010-2020



Source: Fatal Crash Data, Colorado Department of Transportation

<sup>4</sup>Colorado Department of Transportation, Fatal Crash Data

<sup>5</sup>Colorado Department of Transportation, [https://www.codot.gov/safety/safetydata/colorado-problem-identification-id-reports/2021-statewide-perspective\\_final.pdf](https://www.codot.gov/safety/safetydata/colorado-problem-identification-id-reports/2021-statewide-perspective_final.pdf)

<sup>6</sup>Colorado Department of Transportation, [https://www.codot.gov/library/surveys/2020\\_statewidereport\\_seatbelts.pdf](https://www.codot.gov/library/surveys/2020_statewidereport_seatbelts.pdf)



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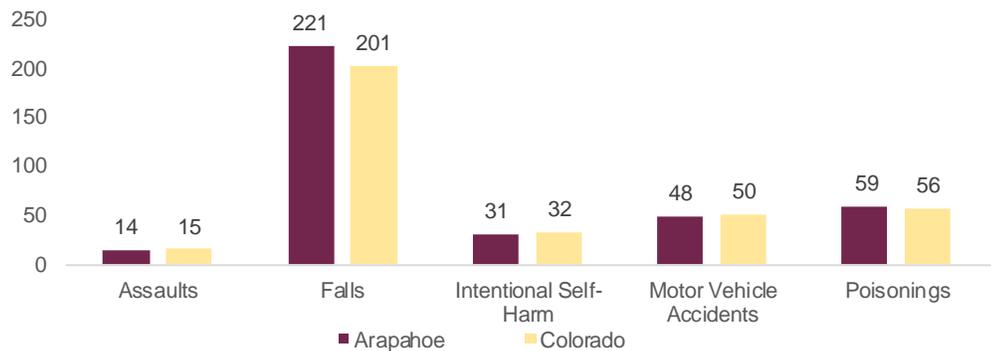
Arapahoe County

## Age-adjusted hospital discharge rates for falls are higher than any other injury in Arapahoe County.

Source: Injury Epidemiology Program, Colorado Department of Public Health and Environment

In 2020, nearly half (41%) of adults over the age of 65 years experienced at least one fall in the previous 12 months, an increase from 27% in 2018.<sup>7</sup> In 2020, the age-adjusted rate for hospital discharges mentioning falls (221 per 100,000 population) was higher than any other cause of injury hospitalization and higher than the Colorado rate (201 per 100,000). The age-adjusted hospital discharge rate for falls from 2016-2020 was higher for females than males. To put this in context, the age-adjusted hospital discharge rates for motor vehicle traffic incidents during the same period was 48 per 100,000, intentional self-harm was 31 per 100,000, poisoning due to drugs was 59 per 100,000, and assault was 14 per 100,000 (Figure 4).<sup>8</sup>

Figure 4: Age-Adjusted Hospital Discharge Rates per 100,000, 2020



Source: Injury Epidemiology Program, Colorado Department of Public Health and Environment

## Abuse and Neglect

Abuse, neglect, and violence can happen at school, in the home, at work, and in a caregiving setting. In 2020, there were 6,305 child abuse allegations in Arapahoe County, a 14% decrease from 2017. Just over one in ten of those allegations (13%) were substantiated and the rest were unsubstantiated or pending as of March 2021. The majority of allegations in 2020 were for neglect (76%), followed by physical abuse (16%), sexual abuse (6%), medical neglect (1%), and psychological/emotional abuse (less than 1%).<sup>9</sup> Child abuse may include physical injuries as well as emotional and psychological abuse, which can lead to, among other things, impaired social-emotional skills or anxiety. Exposure to childhood abuse may increase the risk of future violence victimization or perpetration, substance use, delayed brain development, and lower educational attainment, and more. Child abuse and neglect are preventable and it is important to understand and address the risk and protective factors associated with this form of violence.<sup>10</sup>

<sup>7</sup>Colorado Department of Public Health and Environment, Behavioral Risk Factor Surveillance System

<sup>8</sup>Colorado Department of Public Health and Environment, Injury Epidemiology Program

<sup>9</sup>Colorado Department of Human Services, Child Welfare, [https://rom.socwel.ku.edu/CO\\_Public/AllViews.aspx?RVID=682](https://rom.socwel.ku.edu/CO_Public/AllViews.aspx?RVID=682)

<sup>10</sup>Centers for Disease Control and Prevention, <https://www.cdc.gov/violenceprevention/childabuseandneglect/fastfact.html>



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Arapahoe County

## IPV can happen to anyone of any age or sexual orientation/identity.

**Around 1 in 4 women and 1 in 10 men have experienced IPV during their lifetime.**

**More than 43 million women and 39 million men have experienced psychological aggression by an intimate partner in their lifetime.**

Source: Violence Prevention, Centers for Disease Control and Prevention

## Intimate Partner Violence

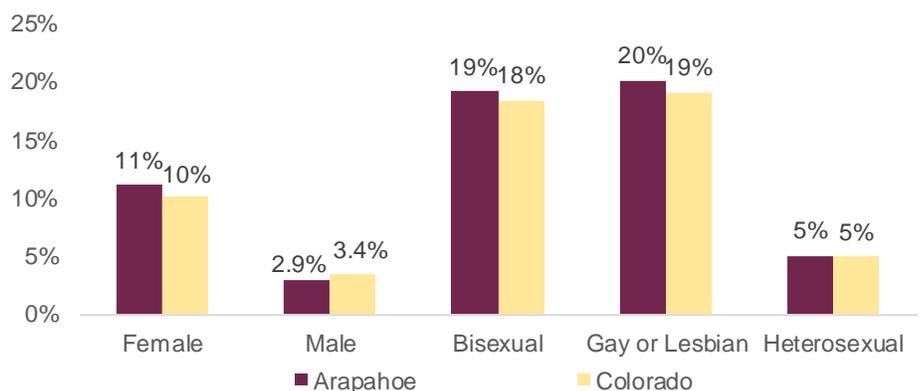
Intimate partner violence (IPV) – also called Domestic Violence – is “abuse or aggression that occurs in a romantic relationship.”<sup>11</sup> IPV in adolescence may be called Teen Dating Violence. According to the Centers for Disease Control and Prevention (CDC), millions of people in the United States are impacted by IPV each year, with about one in four women and one in ten men having experienced sexual violence, physical violence, or stalking by an intimate partner in their lifetime. More than 43 million women and 38 million men have experienced psychological aggression, such as verbal and non-verbal communication with intention to mentally or emotionally harm or exert control over their partner, in their lifetime.<sup>11</sup>

In 2019, Colorado had at least 60 incidents of fatal domestic violence resulting in the deaths of 70 people. Nineteen children were involved in 12 of these incidents. Among the 60 incidents, 5% of them occurred in Arapahoe County.<sup>12</sup> Around one in ten high school youth (9%) in Arapahoe County report being physically hurt on purpose by someone they were dating and 7% report being physically forced to have sexual intercourse when they did not want to.<sup>3</sup> Some groups are more likely to experience rape, including female, Hispanic, and multiracial youth, as well as gay, lesbian, and bisexual youth (Figure 5). The CDC indicates that teaching safe and healthy relationship skills to children of all ages and fostering supportive and protective environments that include trusted adults can reduce the risk of teen dating violence and intimate partner violence.<sup>11</sup>

## A thriving community needs a “safe and secure environment—including food, housing, and financial security.”

Tri-County Health Department, CHA Community Engagement Process, 2021

Figure 5: Percent of High School Students Ever Physically Forced to Have Sex When They Did Not Want To, by Sex and Sexual Orientation, 2019



Source: Healthy Kids Colorado 2019, Colorado Department of Public Health and Environment

<sup>11</sup> Centers for Disease Control and Prevention, Violence Prevention, <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/index.html>

<sup>12</sup> Colorado Domestic Violence Fatality Review Board, 2020 Annual Report



A happy, healthy, and thriving community provides safe and clean outdoor spaces, living conditions, and is free from hazards or disease. A safe community is also free from crime, racism, and violence.

Arapahoe County

**“Addressing exposure to crime and violence as a public health issue may help prevent and reduce the harms to individual and community health and well-being.”**

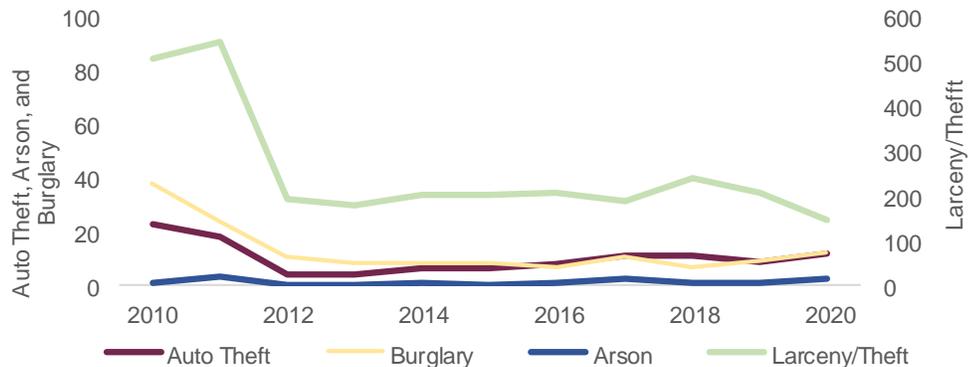
Source: Office of Disease Prevention and Promotion, US Department of Health and Human Services

## Crime

Many of our community members and partners mentioned crime as an important component of safety. Adult violent crime (including rape, homicide, and robbery) arrest rates in Arapahoe County stayed steady from 2010 to 2020 with the exception of aggravated assault which increased from 2012 to 2020 (rate of 22 per 100,000 in 2012 to 31 per 100,000 in 2020). Property crimes (like auto theft and burglary) slightly increased from 2013 to 2020 with the exception of larceny/theft, which slightly increased from 2013 to 2018 and then decreased through 2020, and arson, which remained steady over the same time period (Figure 6).<sup>13</sup>

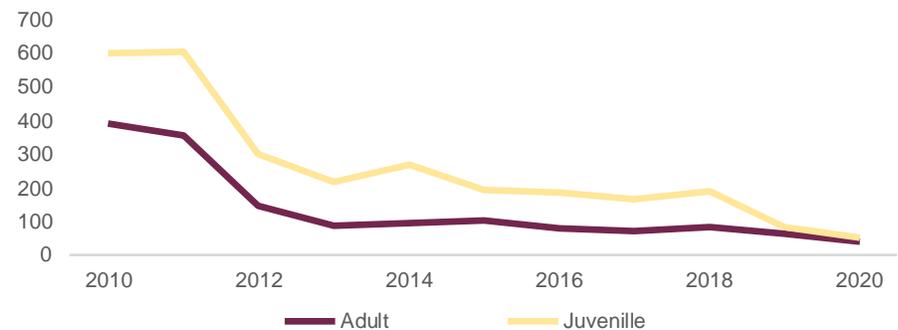
Juvenile crime arrest rates generally declined from 2010 to 2020 in Arapahoe County for all property crimes, robbery, and assault. Arrests for rape have decreased in Arapahoe County, despite a peak in 2015, and annual homicide rates are based on a small number of events, making it difficult to identify trends. Arrests for juvenile motor vehicle theft slightly increased from 2012 to 2017 before steadily declining through 2020. While drug violation arrest rates have decreased for both adults and juveniles, Figure 7 shows that arrest rates per 100,000 are higher for juveniles than they are for adults.<sup>13</sup> Addressing exposure to crime and violence as a public health issue may help prevent and reduce the harms to individual and community health and wellbeing.<sup>14</sup>

**Figure 6: Adult Property Crime Arrest Rates per 100,000,\* Arapahoe County, 2010-2020**



\*Note that Larceny/Theft rates are on the right-hand-side y-axis and on a different scale.  
Source: Division of Criminal Justice, Colorado Department of Public Safety

**Figure 7: Drug Violation Arrest Rates per 100,000, Arapahoe County, 2010-2020**



Source: Division of Criminal Justice, Colorado Department of Public Safety

<sup>13</sup>Colorado Department of Public Safety, Department of Criminal Justice, <https://ors.colorado.gov/ors-crimestats>  
<sup>14</sup>US Department of Health and Human Services, Office of Disease Prevention and Health Promotion, <https://health.gov/healthypeople/objectives-and-data/social-determinants-health/literature-summaries/crime-and-violence>



A happy, healthy, and thriving community provides safe and clean outdoor spaces, living conditions, and is free from hazards or disease. A safe community is also free from crime, racism, and violence.

Arapahoe County

## Between 2014 and 2019, firearm injury deaths in Colorado were greater than deaths due to car crashes, opioid overdoses, HIV, and colon cancer.

Colorado Violent Death Reporting System, Colorado Department of Public Health and Environment

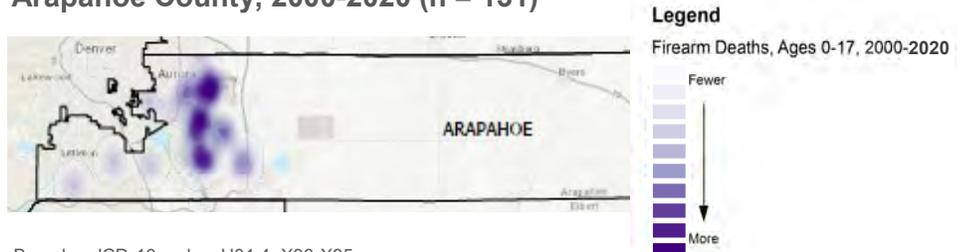
## Firearms

Firearm-injury-related deaths are an important and complex public health issue in Colorado. Between 2014 and 2019, the number of firearm injury deaths in Colorado was greater than deaths due to car crashes, opioid overdoses, HIV, and colon cancer.<sup>15</sup>

Between 2000 and 2020, 61 youth aged 17 and under died in Arapahoe County due to firearm-related violence. Firearm-related violent deaths include deaths due to homicide, suicide, unintentional injury, and unknown intent. Most of these deaths were due to homicide (41%) and suicide (51%), and most of these deaths were male (77%). The map below shows homicide deaths of youth ages 0-17 between 2000-2020 (Map 1). Among all residents of Arapahoe County, there were 100 firearm-related violent deaths in 2020, accounting for 2% of all deaths in 2020.<sup>16</sup> Most of the people who died in a firearm-related incident are male (85%) and White, Non-Hispanic (73%). Reducing access to firearms and ensuring safe storage of firearms can decrease the likelihood of firearm-related deaths.<sup>17</sup>

Safety is a basic need for a happy and healthy life. When people feel safe at home, at school or work, on the road, and wherever they may be, they are able to better learn and participate in discussions, able to think more clearly and calmly, and able to make healthier decisions. Working together with each other, our communities, and our policymakers, we can help ensure safety for all people in all settings.

Map 1: Youth Firearm Homicide Deaths, Youth Ages 0-17 Years, Arapahoe County, 2000-2020 (n = 131)



Based on ICD-10 codes: U01.4, X93-X95  
Source: Vital Statistics Program, Colorado Department of Public Health and Environment

<sup>15</sup>Colorado Violent Death Reporting System, <https://cdphe.colorado.gov/center-for-health-and-environmental-data/registries-and-vital-statistics/colorado-violent-death-reporting-system>  
<sup>16</sup>Colorado Health Information Dataset, Colorado Department of Public Health and Environment  
<sup>17</sup>Colorado Department of Public Health and Environment, Vital Statistics Program

## What Our Community Said

- Concerns about safety made up nearly one in 20 (4.2%) comments from community members.
- Most of the safety comments related to feelings of safety at home, in outdoor spaces, and in other places one spends time, such as work.
- Safety was used by community members to mean both “free from crime” as well as “clean, and free from hazards.” This was especially true in comments related to safe outdoor spaces and parks.
- Safety was also used to describe freedom from racism-based actions, bullying, domestic violence, and contentious dialogue.
- Some community members specifically mentioned safe walking places for the elderly and differently abled, especially in regards to weather-related mobility.



*A healthy community is one where everyone has access to a safe, green environment to live, work and play.*



*In a healthy community, all residents enjoy clean air, safe water, and environments free from contaminants. Everyone has access to parks, trails and open space, and affordable recreational opportunities.*

Arapahoe County



## Key Insights

- Climate change poses a significant threat to the health and safety of our residents.
- As climate change continues, experts predict the number of excessive heat days to increase as well as the frequency of other extreme weather events.
- Increasingly poor air quality poses health risks to our community members, especially older adults, young children, and people with respiratory and cardiovascular health problems.
- Like the natural environment, the built environment—infrastructure and design of homes, communities, and cities—impacts our behavior and our health.

**“Climate change is intrinsically linked to public health, food and water security, migration, peace, and security. It is a moral issue. It is an issue of social justice, human rights and fundamental ethics. We have a profound responsibility to the fragile web of life on this Earth, and to this generation and those that will follow.”**

Source: United Nations Secretary-General Ban Ki-moon

Associations between the environment and population health are well established. Arapahoe County community members identified air quality, pollution, climate change, wildfires, drought, and extreme weather conditions as key environmental health concerns. They noted that neighborhood infrastructure, including access to parks and green space were critical to supporting their health in the areas where residents live, work and play. Understanding how the natural and built environment are connected to population health is important to help reduce the negative health outcomes of our changing climate, prepare for future extreme weather events, and foster a manmade system that promotes clean air and water, and access to green spaces.

## Climate Change

Climate change poses many challenges for population health. The increased frequency of extreme heat days and wildland fires, multi-year drought, floods, and poor air quality can all increase the incidence of poor health outcomes.

## Extreme Heat Days

As global temperatures continue to rise, so do the number of extreme heat days: a period of high heat and/or humidity with temperatures above 90 degrees for at least two to three days. Extreme heat days can be dangerous for all, but especially for vulnerable populations such as children, older adults, and the outdoor workforce. Prolonged heat exposure can cause heat exhaustion, cramps, heat stroke and death.<sup>1</sup> Mitigation strategies for extreme heat days include heat wave early warning systems and proactive heat wave response plans, increased access to air conditioning in homes, increased hydration when

<sup>1</sup> National Institute of Health; [https://www.niehs.nih.gov/research/programs/climatechange/health\\_impacts/heat/index.cfm](https://www.niehs.nih.gov/research/programs/climatechange/health_impacts/heat/index.cfm)





In a healthy community, all residents enjoy clean air, safe water, and environments free from contaminants. Everyone has access to parks, trails and open space, and affordable recreational opportunities.

Arapahoe County

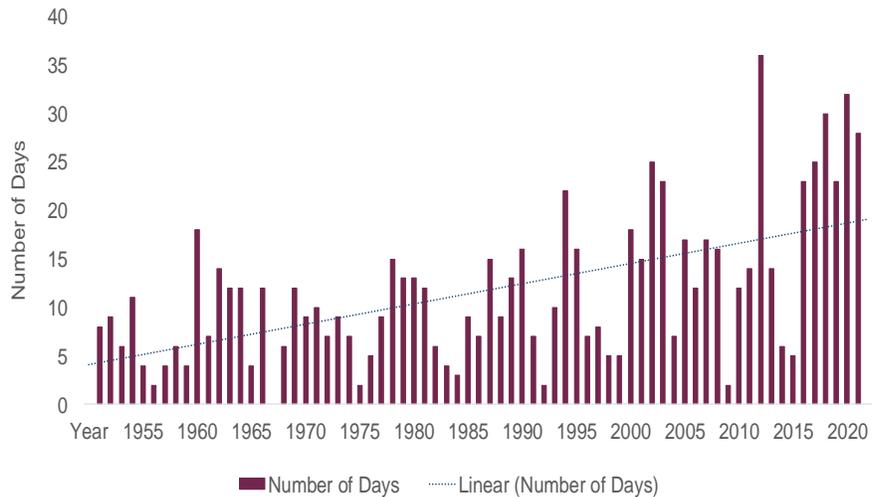
**“Widespread scientific consensus exists that the world’s climate is changing. Some of these changes will likely include more variable weather, heat waves, heavy precipitation events, flooding, droughts, more intense storms, sea level rise, and air pollution. Each of these impacts could negatively affect public health.”**

Source: The U.S. Centers for Disease Control and Prevention

outdoors, and decreased time spent outdoors during extreme heat events.<sup>2</sup> Reducing the carbon footprint of our community by improving our built environment and increasing access to renewable energy are two ways we can combat climate change. Designating areas for urban forests can mitigate heat islands (built areas that trap in heat), which can drop the local air temperature by up to 9° F.<sup>3</sup>

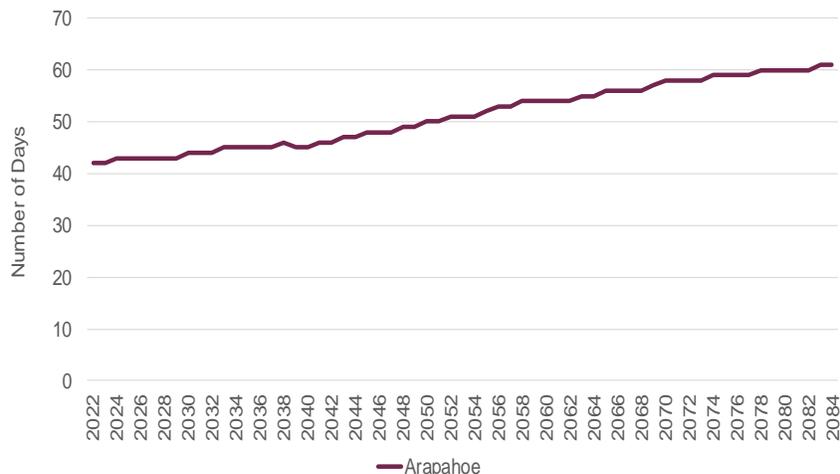
In the Denver Metro Area, there is a positive, increasing trend in the annual number of high heat days. As shown in Figure 1, there is a steady increase in the number of extreme heat days over time, from 1950 through 2021. Looking forward, the number of extreme heat days is expected to increase. As seen in figure 2, the positive, upward trend in number of extreme heat days is projected to continue to rise steadily over the next sixty years.

**Figure 1: Number of Days Air Temperature was over 95° F in the Denver Metropolitan Area, 1950-2021**



Source: United States. (2006). NOAA online weather data (NOWData): Interactive data query system : public fact sheet. Washington, D.C.: National Oceanic and Atmospheric Administration (NOAA)

**Figure 2: Predicted Number of Annual Extreme Heat Days in Arapahoe County, 2022-2082**



Source: Centers for Disease Control and Prevention, North American Land Data Assimilation System data

<sup>2</sup> <https://www.cdc.gov/climateandhealth/effects/default.htm>

<sup>3</sup> [https://www.cdc.gov/climateandhealth/pubs/extreme-heat-final\\_508.pdf](https://www.cdc.gov/climateandhealth/pubs/extreme-heat-final_508.pdf)



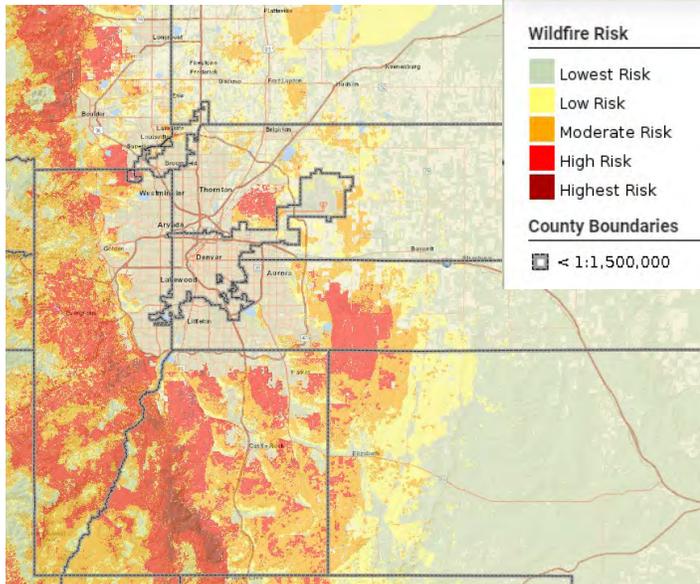
In a healthy community, all residents enjoy clean air, safe water, and environments free from contaminants. Everyone has access to parks, trails and open space, and affordable recreational opportunities.

## Arapahoe County

### Since 2001, Colorado's 20 largest fires on record have occurred.

Source: Colorado Division of Fire Prevention & Control <https://dfpc.colorado.gov/wildfire-information-center/historical-wildfire-information>

Figure 3: Wildfire Risk in the Denver Region, 2019



Source: Colorado State Forest Service, <https://co-pub.coloradoforestatlas.org/#/>

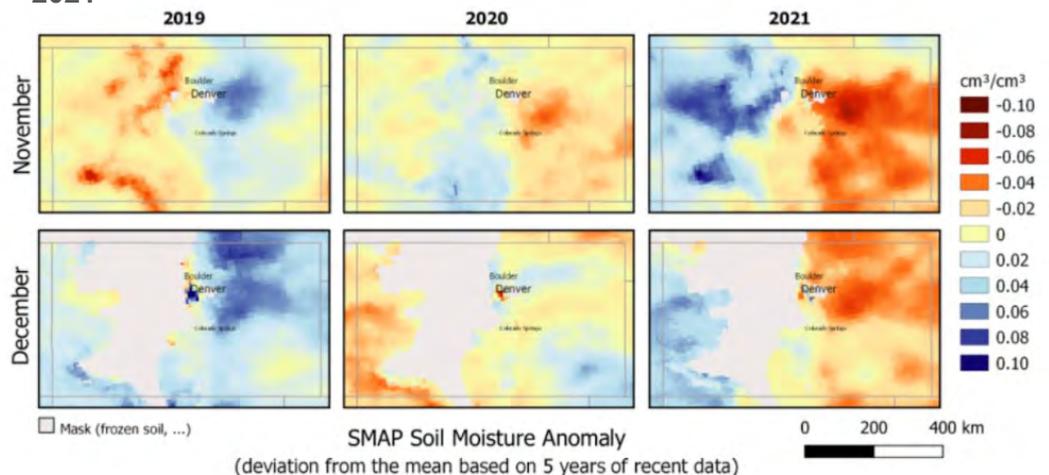
### Wildland Fires

Burning over 6,200 acres, destroying 1,000 homes, and displacing more than 35,000 residents, the Marshall fire in December 2021 in the suburban areas of Boulder County was one of the most destructive fires in Colorado history.<sup>4</sup> Colorado's largest fire to date, the Pine Gulch Fire, burned over 139,000 acres in July 2020.<sup>5</sup> Global warming has extended fire seasons into the winter, and a historic, multi-year drought has expanded fire regions. The Colorado Forest Service reported in 2018 that over half the state's population now lives in wildfire risk areas, a 50% increase in the past five years.<sup>6</sup> The Forest Service estimates that approximately 40% of Arapahoe County residents reside in wildland-urban interface (WUI) with potential impact by wildfire. Most of these residents (30%) are in a low-to-moderate risk areas,<sup>6</sup> areas that have the same risk level as areas that burned during the Marshall Fire.

Soil in the Front Range and Eastern Plains of Colorado has also become drier in recent years, fostering an environment for fire to spread more quickly (Figure 4). Drier forests have also supported the bark beetle epidemic, increasing wildfire fuel.<sup>7</sup>

In Arapahoe County, poor air quality from wildfire smoke has become a summer staple and negatively impacts physical and mental health. As one resident commented, "Air Quality [is a key health problem] - 30+ days of poor air in the summer of 2021 is horrible for fitness and mental health." Wildland fires pose several challenges to population health including immediate safety, housing displacement, decreased air quality due to smoke exposure, and the potential for water quality complications.

Figure 4: Colorado Soil Moisture, by cubic centimeter, Colorado 2019-2021



<sup>4</sup> Colorado Wildfire: What We Know, New York Times; <https://www.nytimes.com/2021/12/31/us/colorado-wildfires.html>

<sup>5</sup> Mesa County Sheriff's Office, <https://sheriff.mesacounty.us/FireInformation/>

<sup>6</sup> Colorado Forest Service, [https://co-pub.coloradoforestatlas.org/api/docs/Arapahoe\\_WUIR\\_Infosheet.pdf](https://co-pub.coloradoforestatlas.org/api/docs/Arapahoe_WUIR_Infosheet.pdf)

<sup>7</sup> <https://csfs.colostate.edu/2018/11/26/half-of-coloradans-now-live-in-areas-at-risk-to-wildfires/>

Source: <https://www.climatecentral.org/news/data-may-be-colorados-best-bet-to-mitigate-increasing-wildfire-risk-on-the-front-range>



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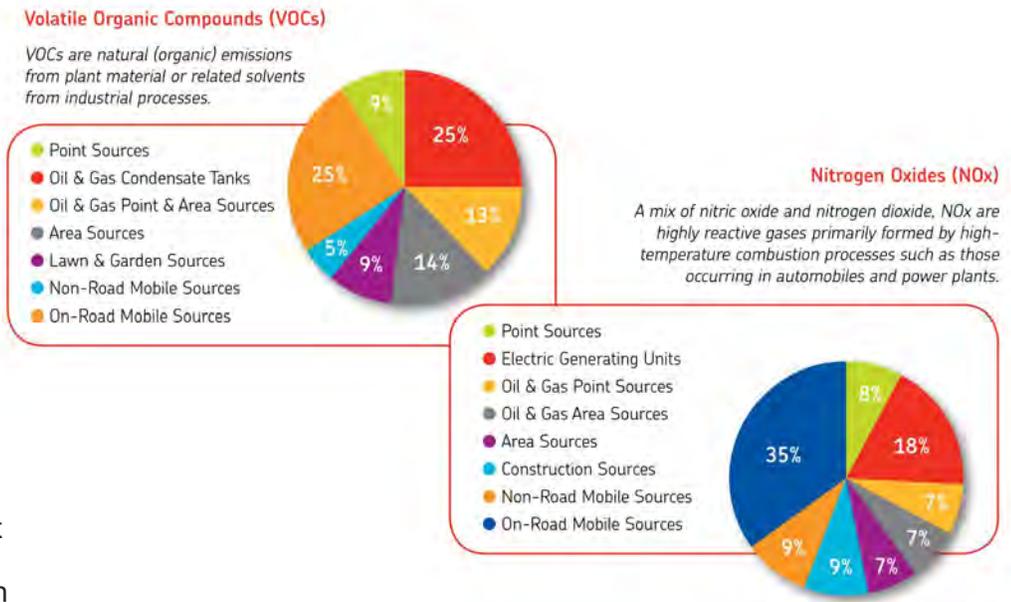
Arapahoe County

## Air Quality

Smoke from wildland fires combined with increasing levels of ozone have created an environment for some of the worst air quality in Colorado history. Ozone at the ground-level forms from the combination of Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx) (Figure 5). Heat and sunlight trigger this combination, leading to higher ozone levels in the summer. In the summer of 2021, ozone pollution in the Front Range reached dangerous levels: levels 48% higher than the federal health limit.<sup>8</sup> More than just being unpleasant, poor air quality contributes to many adverse health outcomes, including respiratory disease, cardio-vascular disease, and cancer.<sup>9</sup> It is particularly harmful to young children, older adults, and those who have an existing respiratory condition. Air quality in Colorado has been steadily worsening over the past few decades (Figure 6).

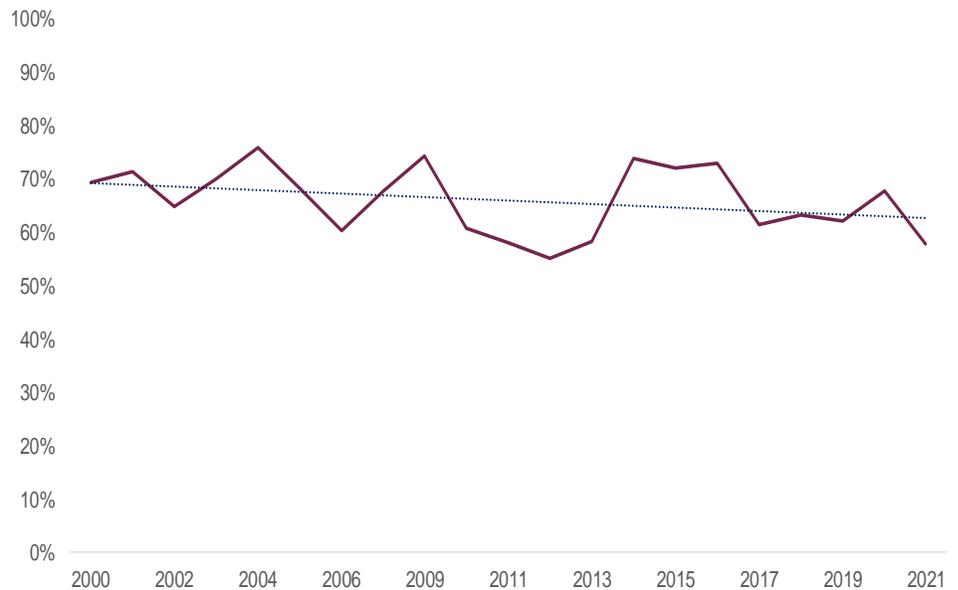
Living or working in Arapahoe County, you may have seen the “Ozone Action-Day Alerts.” These notices are released when ozone exceeds healthy levels. Smoke exposure and ozone can lead to many adverse effects, including shortness of breath, eye irritation, the triggering of asthma symptoms, chronic obstructive pulmonary disease, and premature death.<sup>10,11</sup> Ozone is one of the biggest contributors to poor air quality and comes from mobile emission sources such as cars, trucks, and buses.<sup>12</sup> In 2020, the EPA designated the Denver Metro Area/ Front Range as a “serious” nonattainment area for ozone. The area will be reclassified as “severe” in 2022 due to high ozone levels recorded during 2020 and 2021.<sup>13</sup>

Figure 5: What forms ground-level ozone?



Source: [http://raqc.org/wp-content/uploads/2014/04/RAQC\\_LocalGvt\\_Brochure\\_Final.pdf](http://raqc.org/wp-content/uploads/2014/04/RAQC_LocalGvt_Brochure_Final.pdf)

Figure 6: Percentage of Days With Good Air Quality, Arapahoe County, 2000 - 2021



Source: US Environmental Protection Agency. Air Quality System Data Mart

<sup>8</sup> <https://www.reporterherald.com/2021/07/24/ozone-air-pollution-colorado-front-range/>

<sup>9</sup> <https://www.niehs.nih.gov/health/topics/agents/air-pollution/index.cfm>

<sup>10</sup> <https://www.epa.gov/ozone-pollution/health-effects-ozone-pollution>

<sup>11</sup> <https://www.epa.gov/air-research/wildland-fire-research-health-effects-research#:~:text=The%20effects%20of%20smoke%20from,especially%20vulnerable%20to%20smoke%20exposure.-,smoke-premature-death>

<sup>12</sup> <https://www.epa.gov/haps/hazardous-air-pollutants-sources-and-exposure>

<sup>13</sup> <https://cdphe.colorado.gov/history-of-ozone-in-colorado#:~:text=Under%20the%20standard%2C%20the%20Denver,set%20by%20the%20federal%20government.>



*In a healthy community, all residents enjoy clean air, safe water, and environments free from contaminants. Everyone has access to parks, trails and open space, and affordable recreational opportunities.*

Arapahoe County

## Health problems as identified by the [focus] group participants were COVID-19, water system quality (e-coli outbreak in Englewood), poor air quality and safety.

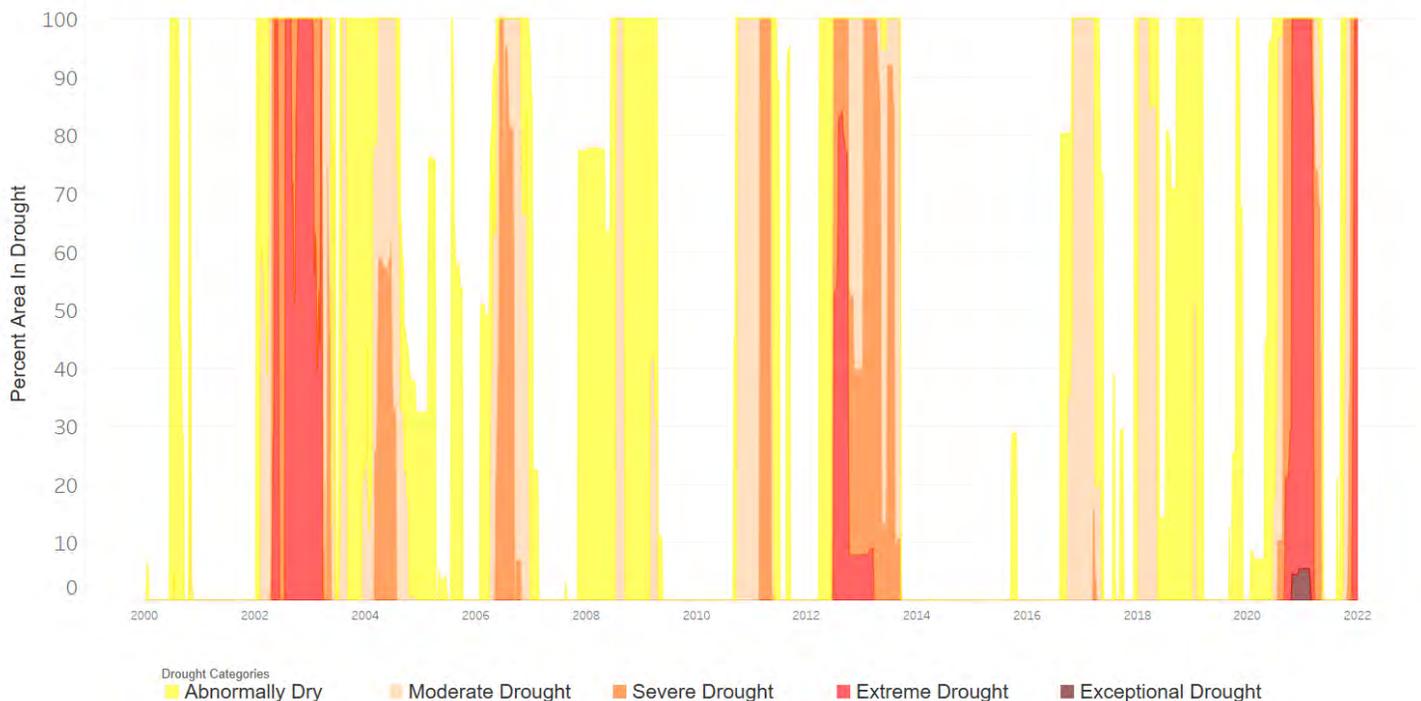
Tri-County Health Department, CHA Community Engagement Process, 2021

## Water Quality and Drought

Contaminated water can lead to a variety of poor health outcomes, from infectious diseases to cancer. While many factors affect water quality, how we use and manage our land—whether it be for agriculture, oil and gas production, or industrial activities—can lead to groundwater contamination.<sup>13</sup> Potable, “drinking,” water is treated to remove and routine tested for contaminants. In August 2021, a boil water advisory was put in place for residents served by a specific water distribution zone in Englewood, following the discovery of e-coli bacteria during routine water testing. While this is a rare occurrence, it brought home the importance of safe, healthy drinking water to residents. Tri-County Health Department community focus group participants and survey respondents mentioned water quality as an important public health issue.

Water supply impacts the quality of our groundwater. As the water supply decreases due to an extended, multi-year drought (Figure 7), the pollutant concentration increases, degrading the quality of our water resources. Colorado’s Water Plan projects that the state “faces the possibility of a significant water supply shortfall within the next few decades, even with aggressive conservation and new water projects.”<sup>14</sup>

Figure 7: Percent of Area in Drought, Arapahoe County, 2000-2021



Source: Akyuz, F. A. 2017. Drought Severity and Coverage Index. United States Drought Monitor.

<sup>13</sup> <https://www.nrdc.org/issues/protect-groundwater-supply>

<sup>14</sup> <https://www.colorado.gov/pacific/cowaterplan/plan>



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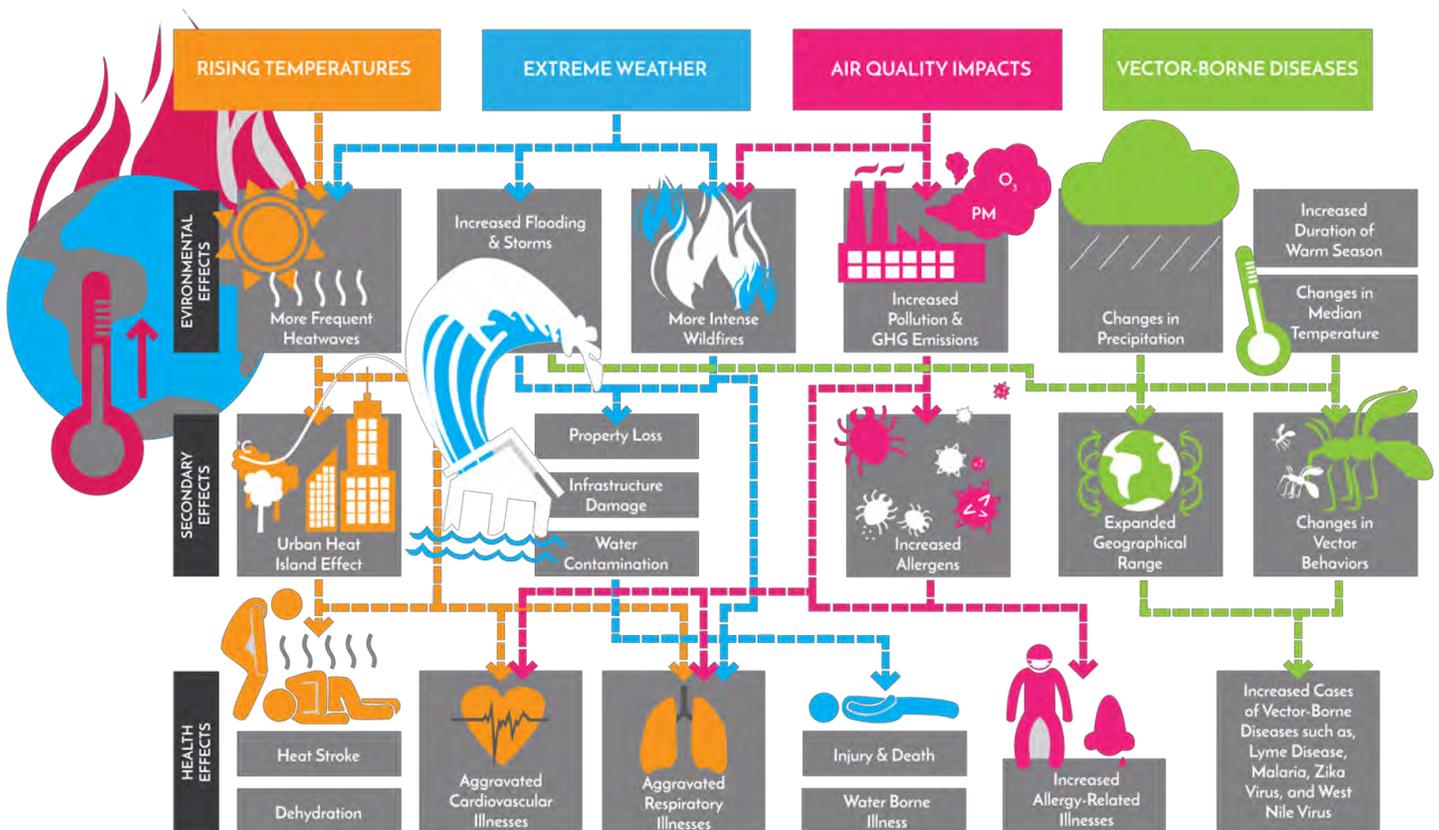
Arapahoe County

## Climate and Mental Health

In addition to negative physical health symptoms and outcomes, climate change can negatively impact mental health, community health, and connectedness. Figure 8 illustrates some of the ways rising temperatures, extreme weather, impacts to air quality, and vector-borne diseases—all possible outcomes of climate change—impact health. “The ability to process information and make decisions, without being disabled by extreme emotional responses, is threatened by climate change. An emotional response is normal; however, in an extreme case, it can interfere with our ability to think rationally, plan our behavior, and consider alternative actions. An extreme weather event can be a source of trauma and cause disabling emotions. More subtle and indirect effects of climate change can add stress to people’s lives in varying degrees. Whether experienced indirectly or directly, stressors to our climate translate into impaired mental health that can result in depression and anxiety.”<sup>16</sup>

Helping people make personal or family preparedness plans, fostering social support, and building people’s belief in their own ability to succeed can reduce the risk of negative mental health impacts resulting from climate change. Community health can also suffer from climate events. Increased personal aggression, disrupted sense of belonging, loss of community cohesion, increased violence and crime, and social instability are some of the potential impacts to a community.<sup>16</sup> Preparing infrastructure, building social connection, developing community-wide plans, and paying special attention to people at higher risk for negative outcomes, can help communities to increase resiliency to the effects of a changing climate.

Figure 8: How climate change affects your health



<sup>16</sup> Clayton, S., Manning, C. M., Krygsmann, K., & Speiser, M. (2017). Mental Health and Our Changing Climate: Impacts, Implications, and Guidance. Washington, D.C.: American Psychological Association, and ecoAmerica. <http://www.apa.org/news/press/releases/2017/03/mental-health-climate.pdf>



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Arapahoe County

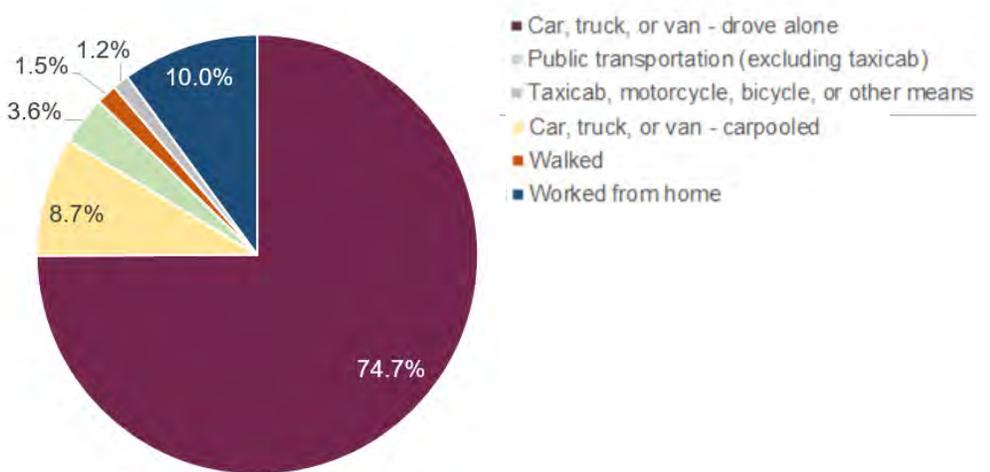
**Community members said that neighborhood environments that support health are clean, safe, offer parks or green space, and are nearby.**

Tri-County Health Department, CHA Community Engagement Process, 2021

## Climate and the Built Environment

The built environment is composed of physical and social elements that comprise the structure of a community which can influence a broad range of public health issues. Everyday actions and neighborhood-scale interventions can reduce the factors that negatively affect environmental quality and resilience to climate change. Creating opportunities for moving around a neighborhood on foot or on a bicycle can reduce the number of vehicle trips taken, thereby improving air quality, and increasing physical activity among residents. The majority of people in our Arapahoe county drive alone to work (Figure 10).

Figure 10: Means of Transportation to Work, Arapahoe County, 2020



Source: U.S. Census American Community Survey, 2020, 5-year estimates

## The Built Environment and Obesity

The obesity epidemic is a growing concern in Arapahoe County; more than 6 in 10 individuals are overweight or obese.<sup>17</sup> Neighborhood-scale environmental factors influence much more than environmental quality. The built environment has been shown to be related to physical activity and obesity.<sup>18</sup> Trees along our roadways can provide much needed shade and cooling on a hot summer day. Having access to parks and open space provides mental health benefits, as well as opportunities for physical activity. A majority of community members in Arapahoe County did not meet the physical activity guidelines of 150 minutes per week in 2019.<sup>17</sup> Safety concerns, uneven and hilly terrain, limited recreational facilities and inadequate lighting have been associated with reduced outdoor activity of a community.<sup>19</sup> Planning neighborhoods with daily health and wellness needs in mind—such as grocery stores and amenities within walking distance, safe sidewalks, designated bike lanes, and accessible and affordable public transit—can improve the health and wellbeing of residents and all Coloradans.

<sup>17</sup> Behavioral Risk Factor Surveillance System, 2018-2020

<sup>18</sup> Saelens, B.E., J.F. Sallis and L.D. Frank. (2003). "Environmental Correlates of Walking and Cycling: Findings from the Transportation, Urban Design and Planning Literatures." *Annals of Behavioral Medicine* 25:80-91.

<sup>19</sup> [https://coloradohealth.org/sites/default/files/documents/2017-01/Obesity\\_Lit\\_Rev\\_Final-Obesity%20What%20the%20Research%20Shows.pdf](https://coloradohealth.org/sites/default/files/documents/2017-01/Obesity_Lit_Rev_Final-Obesity%20What%20the%20Research%20Shows.pdf)





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## Arapahoe County

**Figure 9: Percent of Residents Living Within a 10-Minute Walk of a Park, 2020**

Arapahoe County*	
Sheridan	97%
Englewood	95%
Littleton	94%
Greenwood Village	93%
Centennial	91%
Aurora	87%
Bow Mar	81%
Columbine Valley	62%
Cherry Hills Village	55%
Foxfield	11%

\*Data are not available for all municipalities in Arapahoe County

Source: Trust for Public Land, <https://www.tpl.org/parkserve>

As shown in Figure 9, residents in our municipalities have varying accessibility to publicly-owned local, state, and national parks, school parks, or privately-owned parks open to the public.

By focusing on community resilience and neighborhood design, we can continue to influence policies and programs that create healthier environments. This is critical in communities that currently face disparate environmental impacts. These neighborhoods are often low-income communities or communities of color. By putting equity and the community voice in the forefront, we can work together to ensure that everyone has access to a cleaner, more enjoyable environment.

## What Our Community Said

- Neighborhood safety was noted as a concern by community members. Safe neighborhoods are free from crime, and comprise spaces in which people feel safe and comfortable, clean, and free from environmental hazards, including pollution.
- The following were noted as important environmental factors in order for a community to be happy, healthy, thriving:
  - Improved water, air quality
  - Space for outdoor activity
  - Open space to get fresh, clean air and exercise
- Climate change and its effects, including wildfires, drought, and extreme weather conditions, were mentioned by community members with much more frequency than in previous community outreach.
- Neighborhood infrastructure and built environment were mentioned as important parts of happy, healthy, thriving communities.
- Community members said that neighborhood environments that support health are clean, safe, offer parks or green space, and nearby



*In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.*

---

 Tri-County Health Department | 2022 Community Health Assessment  
Arapahoe County, Colorado



In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.

Arapahoe County

## Key Insights

- Informed by our environments, neighborhoods, and opportunities, individual behaviors impact health.
- By the time they are in 12th grade, about half of all high school students in Arapahoe County have ever used an electronic vapor product
- Among adults obesity has remained fairly constant since 2020, but remains high: about 61% of adults in Arapahoe County are either overweight or obese.

**“Four unhealthy behaviors – tobacco use, poor nutrition, physical inactivity, and excessive alcohol consumption – are the leading causes of preventable disease, disability, and premature death in the United States each year.”**

Source: U.S. Centers for Disease Control and Prevention

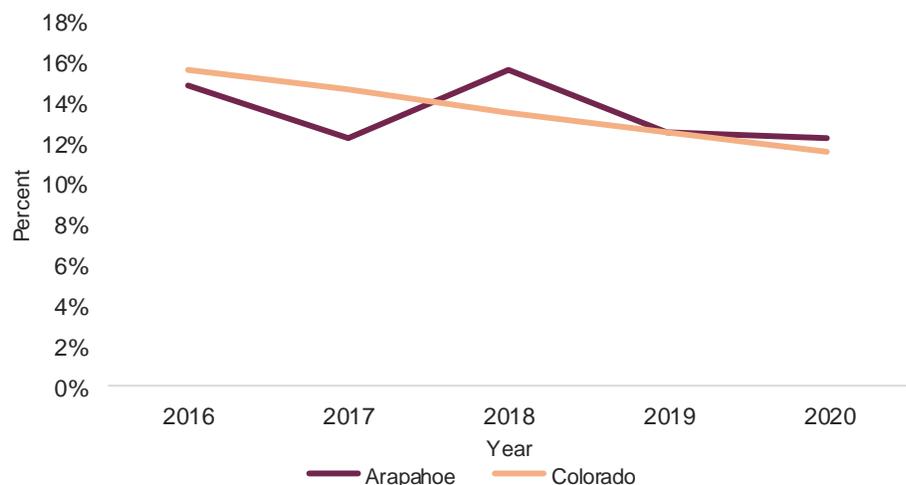
According to the Centers for Disease Control and Prevention (CDC), a few health behaviors, including tobacco use, poor nutrition, lack of physical activity, and excessive alcohol use, are the causes of many chronic diseases. In 2018, about half of U.S. adults had at least one chronic condition, and over a quarter of adults had two or more chronic conditions.<sup>1</sup> Americans with three or more chronic conditions make up approximately 28% of the population but account for 66% of total health care spending.<sup>2</sup> People with multiple chronic conditions spend more on going to office visits, inpatient visits, and prescriptions.<sup>2</sup>

## Tobacco

Tobacco use is the leading cause of preventable disease, disability, and death in the U.S. Cigarette smoking can harm nearly every organ of the body. Smoking causes several chronic health conditions including cancer, heart disease, stroke, lung diseases, and type 2 diabetes.<sup>3</sup>

Figure 1 shows the percentage of adults in Arapahoe County who currently smoke cigarettes. During 2016 to 2020, rates of smoking continued to decline. Smoking was more common among people who lived in households with a low income (less than \$25,000) and among people with less than a high school education.<sup>4</sup>

Figure 1: Percent of Adults who are Current Smokers, 2016-2020



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

<sup>1</sup>Boersma, P., Black, L. I., & Ward, B. W. (2020). Prevalence of multiple chronic conditions among US adults, 2018. *Preventing Chronic Disease*, 17. DOI: <https://doi.org/10.5888/pcd17.200130>.

<sup>2</sup>Buttorff, C., Ruder, T., & Bauman, M. (2017). Multiple Chronic Conditions in the United States. Rand Corporation. <https://www.rand.org/pubs/tools/TL221.html>.

<sup>3</sup>National Center for Chronic Disease Prevention and Health Promotion <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>.

<sup>4</sup>Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment



*In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.*

## Arapahoe County

### Quitting smoking and vaping were among the top health problems perceived in the community.

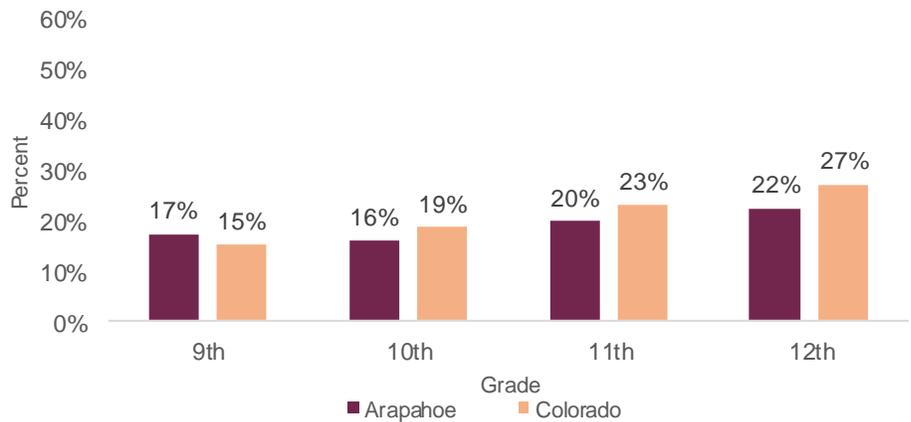
Source: Tri-County Health Department, CHA Community Engagement Process, 2021

Among young people, cigarette smoking has been decreasing in the United States.<sup>5</sup> The percentage of Arapahoe County high school students who have ever smoked a cigarette was 19% overall, in 2019, and increased with grade level (Figure 2).<sup>6</sup> Female, Hispanic, and white, non-Hispanic students were more likely to have smoked cigarettes.<sup>6</sup>

In 2019, 44% of students in Arapahoe County—over double the percentage who have smoked cigarettes—used electronic vapor products, also called “e-cigarettes” or “vaping.”<sup>6</sup> Figure 3 shows that the percent of vaping increased with grade level. Among students who had used vapor products, 12.3% perceived that they are less harmful than other tobacco products. However, e-cigarettes contain nicotine, which is addictive and can be harmful to brain development.<sup>5</sup>

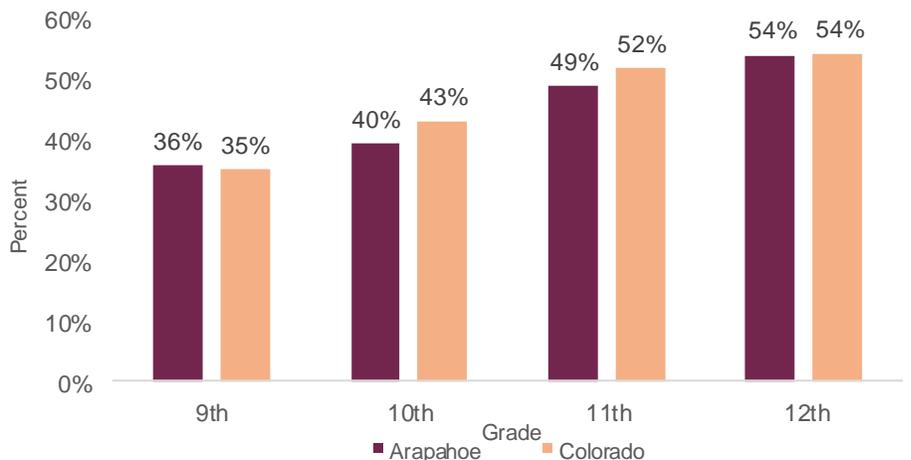
Exposure to secondhand smoke can also be problematic for children, adults, and pregnant women. In 2019, 18% of Arapahoe County students were inside their home while someone was smoking a tobacco product or e-cigarette for one or more days in the past week.<sup>6</sup>

**Figure 2: Percent of students who have ever smoked a cigarette by grade level, 2019**



Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey

**Figure 3: Percent of students who have ever used an electronic vapor product by grade level, 2019**



Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey

<sup>5</sup>Centers for Disease Control and Prevention [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.htm](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.htm)

<sup>6</sup>Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey



# Health Behaviors and Outcomes

In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.

Arapahoe County

## Active living, health eating, and healthy behavior in general, are challenging for community members without access to paid time off or leisure time.

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

## Physical Activity and Nutrition

Improved access to affordable, healthy foods and drinks and physical activities in schools, workplaces, and communities can provide opportunities for people to improve healthy behaviors.<sup>7</sup>

Eating fruits and vegetables daily can reduce risk of chronic disease and help people with chronic diseases prevent complications.<sup>7</sup> Fewer than one third of Arapahoe County high school students ate fruits or vegetables one or more times per day per week. In 2019, 78% and 80% of adults in Arapahoe County and Colorado, respectively, ate vegetables once a day.<sup>8</sup> The percentage of adults that ate vegetables increased with increasing household income level.<sup>8</sup> In 2019, 64% of Arapahoe County students drank sugary beverages one or more times per week.

People of all ages can benefit from more physical activity.<sup>9</sup> Figure 4 shows percentages of female and male high school students who get the recommended amounts of physical activity per week. In Arapahoe County and across Colorado, adults with higher household incomes reported being physically active more than those with low household income (Figure 5). Higher income households may be more likely to have access to paid time off and leisure time for physical activity.

Students who ate fruit 1+ time per day, per week, 2019



Arapahoe 31%

Colorado 34%

Students who ate vegetables 1+ times per day, per week, 2019



Arapahoe 24%

Colorado 25%

Students who drank sugary drinks 1+ times/week, 2019

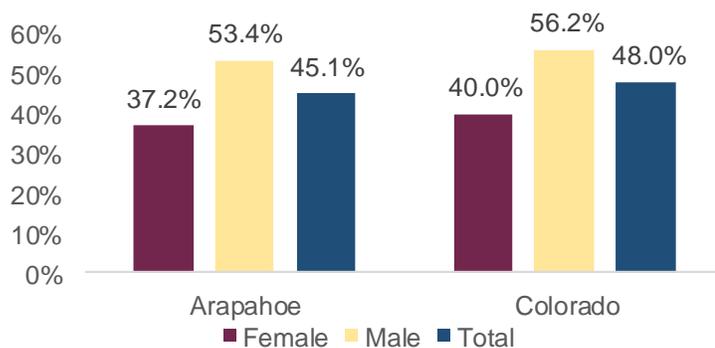


Arapahoe 64%

Colorado 66%

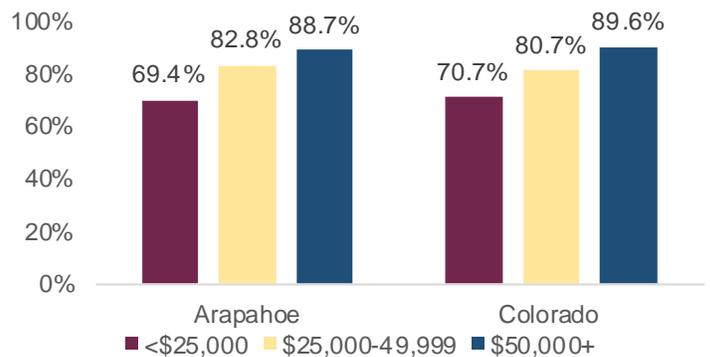
Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey

Figure 4: Percent of High School Students who were Physically Active for 60+ Minutes on 5+ Days per Week, 2019



Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey

Figure 5: Percent of Adults who were Physically Active, by Household Income, 2020



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

<sup>7</sup>Centers for Disease Control and Prevention <https://www.cdc.gov/chronicdisease/pdf/factsheets/poor-nutrition-H.pdf>

<sup>8</sup>Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

<sup>9</sup>Centers for Disease Control and Prevention <https://www.cdc.gov/chronicdisease/pdf/factsheets/physical-activity-H.pdf>



In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.

Arapahoe County

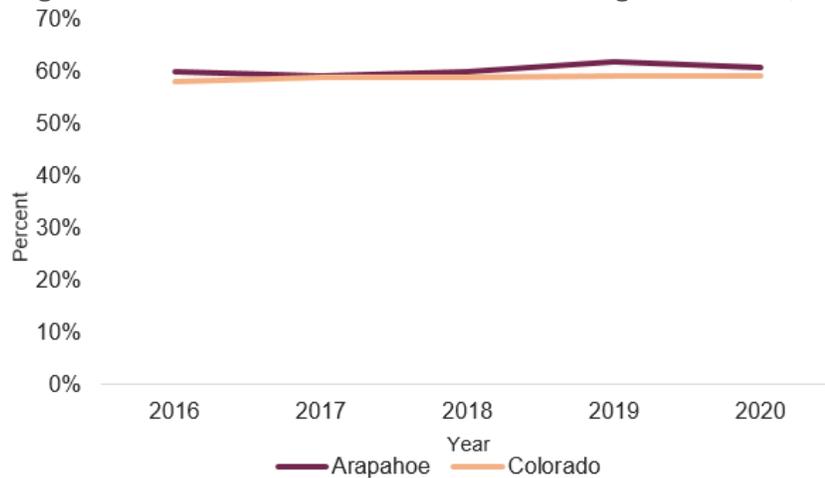
## “Understanding opportunities and barriers to a healthy lifestyle in communities, homes, and workplaces is necessary to inform ways to promote healthy living.”

Source: Centers for Disease Control and Prevention

## Obesity

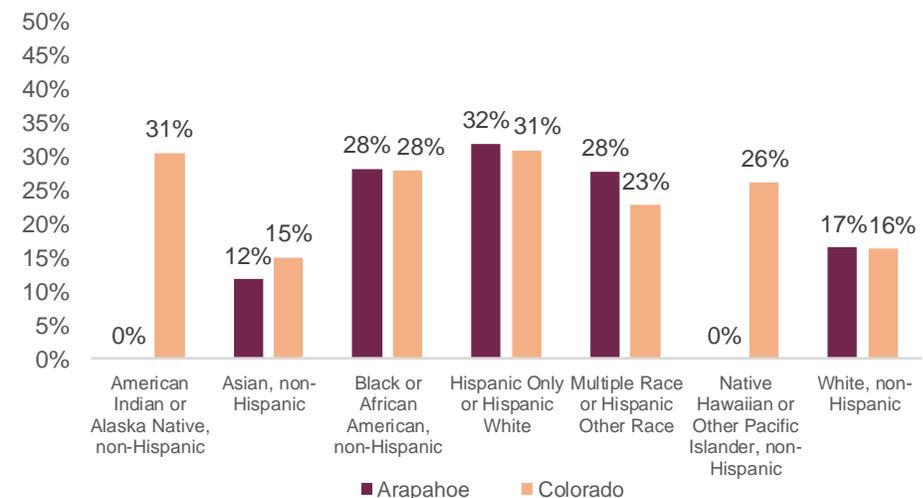
Achieving and keeping a healthy weight requires a lifestyle that includes healthy eating, regular physical activity, optimal sleep, and stress reduction.<sup>10</sup> In the U.S., availability of grocery stores and fast food restaurants varies by racial makeup of neighborhoods and contributes to causing overweight and obesity.<sup>11</sup> Additionally, good sidewalks, nearby trails, and accessible recreation centers are characteristic of communities with higher socioeconomic status (e.g., higher income and education).<sup>12</sup> In addition to having access to exercise classes and parks, community members expressed needing time in their lives in order to take advantage of these resources and create “work-life balance.”<sup>13</sup> Figure 6 shows the percentages of overweight and obese adults in Arapahoe County and Colorado. Figure 7 shows differences in percent of overweight and obesity among high school students by race and ethnicity.

Figure 6: Percent of adults who are overweight or obese, 2016-2020



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

Figure 7: Percent of students who were overweight or obese by race/ethnicity, 2019



Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey

<sup>10</sup>Centers for Disease Control and Prevention <https://www.cdc.gov/healthyweight/index.html>.

<sup>11</sup>Bell, C., Kerr, J., & Young, J. (2019). Associations between obesity, obesogenic environments, and structural racism vary by county-level racial composition. *International Journal of Environmental Research and Public Health*, 16(5), 861. <https://doi.org/10.3390/ijerph16050861>.

<sup>12</sup>Institute of Medicine (US) and National Research Council (US) Committee on Childhood Obesity Prevention Actions for Local Governments; Parker L, Burns AC, Sanchez E, editors. *Local Government Actions to Prevent Childhood Obesity*. Washington (DC): National Academies Press (US); 2009. 5, Actions for Increasing Physical Activity. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK219690/>.

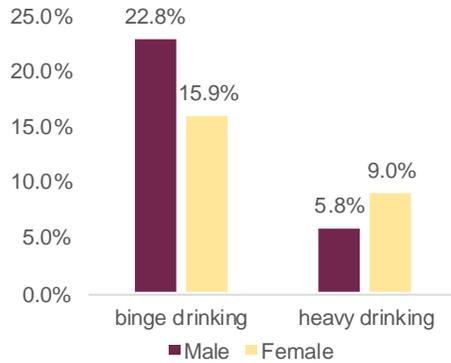
<sup>13</sup>Tri-County Health Department, CHA Community Engagement Process, 2021.



In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.

## Arapahoe County

**Figure 8: Excessive Adult Alcohol Consumption, by Sex, Arapahoe County, 2020**



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

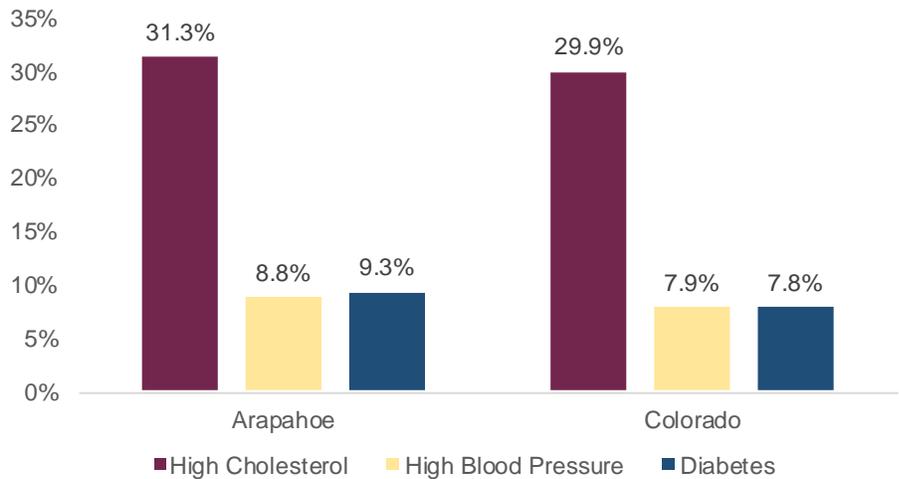
## Alcohol Use

Sometimes considered healthy—a glass of red wine, for example—alcohol use, and particularly excessive alcohol use, negatively impacts health.<sup>14</sup> In Arapahoe County in 2020, 7% of adults reported heavy drinking and 18% reported binge drinking. Heavy drinking consists of 8 or more drinks per week for women—15 or more per week for men. Binge drinking consists of 4 or more drinks during a single occasion for women or 5 or more for men. Excessive drinking differs by sex, (Figure 8), age, race/ethnicity, and other factors, such as self-reported general health and poor mental health. (See Substance Use Section for more information.)

## Heart Disease Risk Factors

Several factors are related to the risk of developing heart disease including family history, age, health behaviors, such as smoking, and chronic conditions, such as diabetes, high blood pressure, and prolonged stress.<sup>15,16</sup> People cannot change their family history or their age – or even some of the environmental factors that cause stress – but they can modify their diet and exercise habits, not smoke, and regularly check their blood pressure, cholesterol, and blood sugar. High blood pressure, high cholesterol, and diabetes can all be treated with lifestyle changes and medications. Figure 9 shows the percent of adults in Arapahoe County and across Colorado who have these three conditions.

**Figure 9: Percent of Adults with Heart Disease Risk Factors, by Risk Factor, 2019**



Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

<sup>14</sup> GBD 2016 Alcohol Collaborators (2018). Alcohol use and burden for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet (London, England)*, 392 (10152), 1015–1035. [https://doi.org/10.1016/S0140-6736\(18\)31310-2](https://doi.org/10.1016/S0140-6736(18)31310-2)

<sup>15</sup> National Heart, Lung, and Blood Institute of the National Institutes of Health <https://www.nhlbi.nih.gov/health/educational/hearttruth/lower-risk/risk-factors.htm>

<sup>16</sup> Dimsdale, J.E. (2008). Psychological Stress and Cardiovascular Disease. *Journal of the American College of Cardiology*, 51(13), 1237-1246. doi:10.1016/j.jacc.2007.12.024.

<sup>17</sup> Centers for Disease Control and Prevention <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>

## Chronic Disease Deaths

Improving healthy lifestyle behaviors across a life span decreases risk for chronic disease deaths and disabilities.<sup>17</sup> Figures 10 through 15 show death rate trends from common chronic disease causes of death for Arapahoe County and Colorado. During 2011 through 2020, cancer, heart disease, and chronic lower respiratory disease (e.g., chronic bronchitis, emphysema, and asthma) death rates were steady or decreased. However, from 2011 to 2020, death rates for Alzheimer’s disease, stroke, and diabetes increased in recent years.



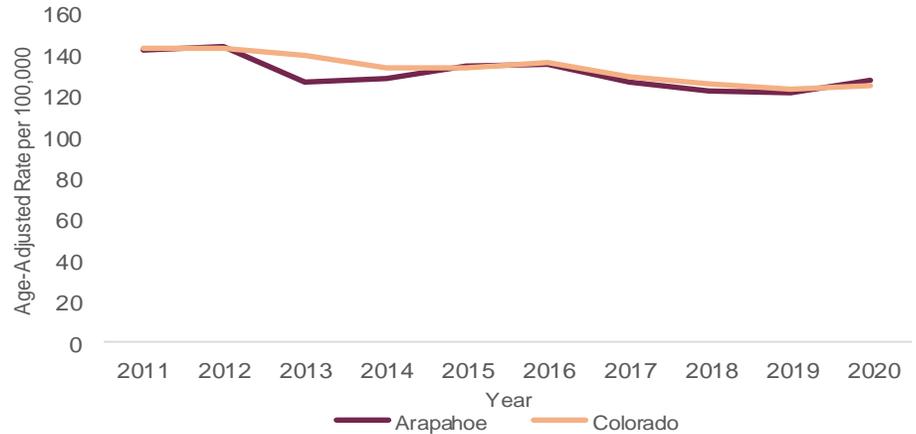
*In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.*

**Arapahoe County**

## Members of the community were concerned about not being able to afford medications for chronic conditions.

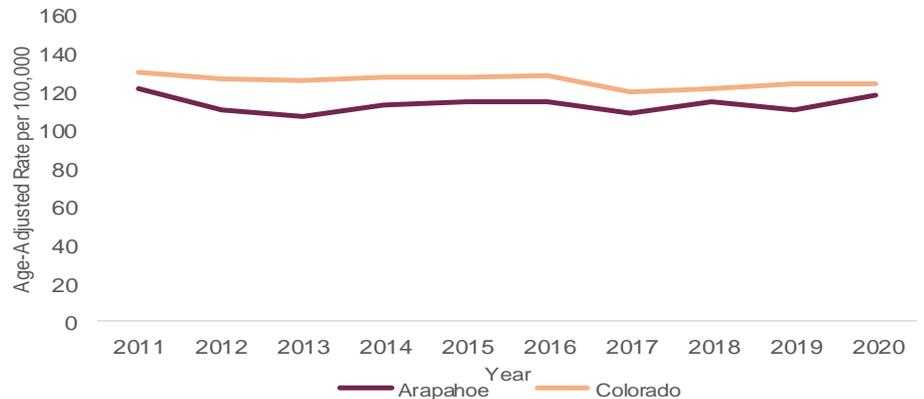
Source: Tri-County Health Department, CHA Community Engagement Process, 2021

**Figure 10: Cancer deaths per 100,000 population, 2011-2020**



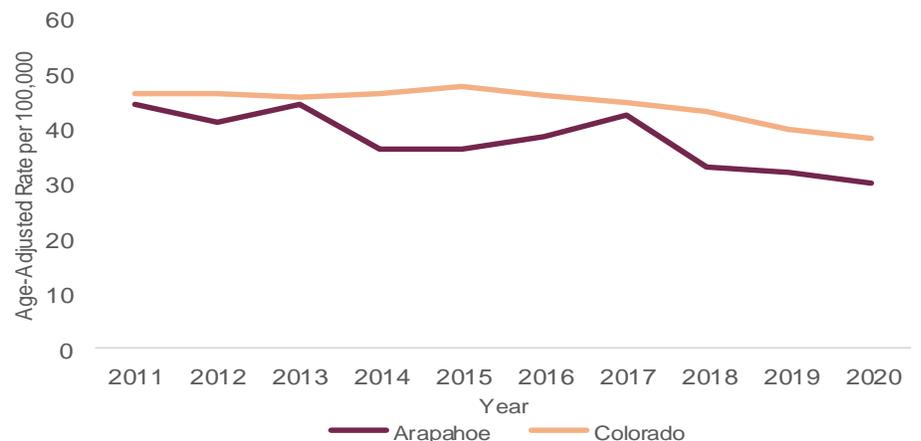
Source: Colorado Department of Public Health and Environment, Colorado Health Information Dataset (COHID), Mortality Statistics

**Figure 11: Heart disease deaths per 100,000 population, 2011-2020**



Source: Colorado Department of Public Health and Environment, Colorado Health Information Dataset (COHID), Mortality Statistics

**Figure 12: Chronic lower respiratory disease deaths per 100,000 population, 2011-2020**



Source: Colorado Department of Public Health and Environment, Colorado Health Information Dataset (COHID), Mortality Statistics

All rates are age-adjusted to the US 2000 standard population.

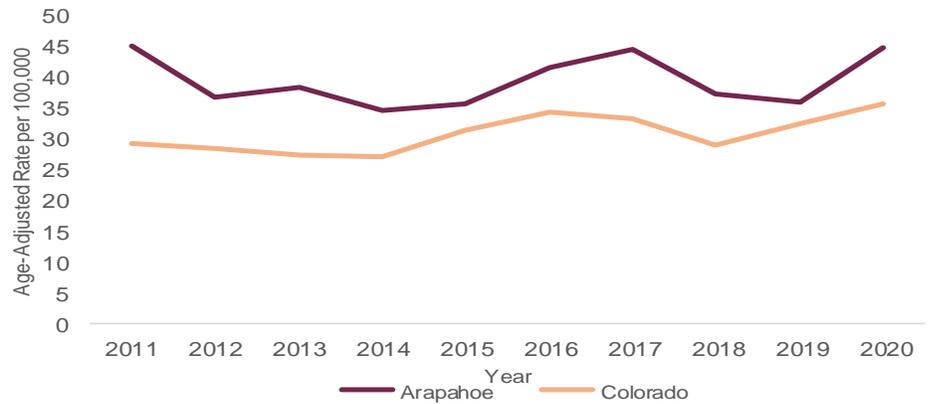




In a healthy community, all residents can access safe and healthy food, practice good health habits, and have the mental and physical energy, vitality, and resilience to live joyfully and face the challenges of their lives.

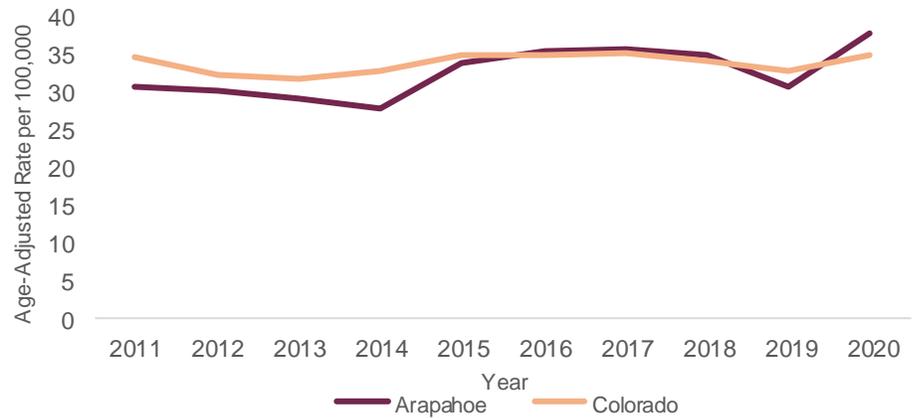
Arapahoe County

### Figure 13: Alzheimer’s disease deaths per 100,000 population, 2011-2020



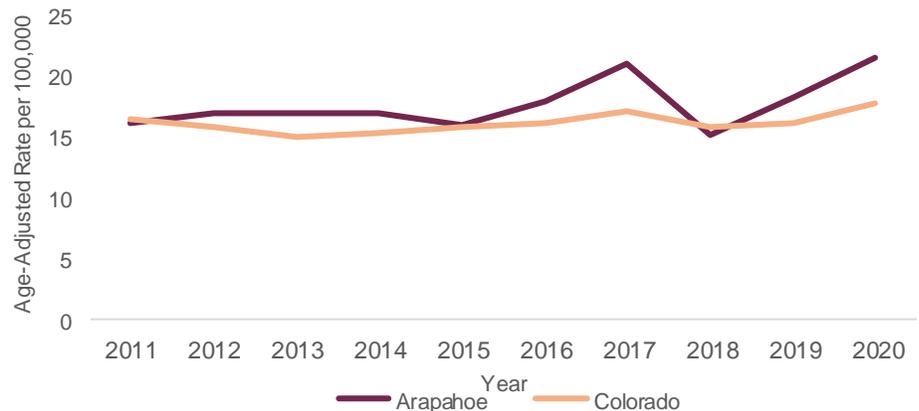
Source: Colorado Department of Public Health and Environment, Colorado Health Information Dataset (COHID), Mortality Statistics

### Figure 14: Stroke deaths per 100,000 population, 2011-2020



Source: Colorado Department of Public Health and Environment, Colorado Health Information Dataset (COHID), Mortality Statistics

### Figure 15: Diabetes deaths per 100,000 population, 2011-2020



All rates are age-adjusted to the US 2000 standard population.

Source: Colorado Department of Public Health and Environment, Colorado Health Information Dataset (COHID), Mortality Statistics





*A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.*

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 Tri-County Health Department | 2022 Community Health Assessment  
Arapahoe County, Colorado



A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.

Arapahoe County



## Key Insights

- Nearly 1 in 4 Arapahoe residents reported they were in poor mental health in 2021.
- Mental health is impacted by a complex combination of experiences, biology, and social conditions including exposure to racism, discrimination, violence, and poverty.
- Connectedness to individuals, family, community, and social institutions are protective factors for positive mental health.

## Nearly 1 in 4 Arapahoe County residents and Coloradans reported they were in poor mental health in 2021.

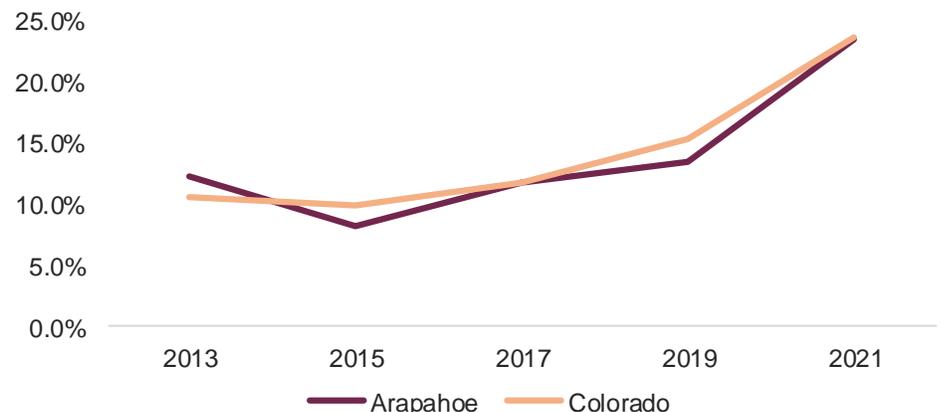
Source: Colorado Health Access Survey 2021, Colorado Health Institute

Mental health is a state of balance in our thoughts, emotions, and behaviors. Positive mental health allows us to feel good about life, supporting our ability to participate in daily activities and accomplish our goals. Everyone, regardless of gender, age, race, income, or religion, faces challenges with their mood, emotions, and behavior from time to time. It is important to talk about our mental health with someone we trust and seek professional care when needed, just as we would with a physical injury or ailment. Challenges to positive mental health are nobody's fault and the discussion applies to everyone, no matter how temporary or serious the mental health need.

In 2021 in Arapahoe County, nearly 1 in 4 residents (23.5%) surveyed reported they were in poor mental health (Figure 1)<sup>1</sup>, an increase from 13.5% in 2019. Nationwide, 1 in 5 adults was living with a mental health disorder in 2020.<sup>2</sup> Mental health disorders are health conditions that are characterized by alterations in thinking, mood, and/or behavior that are associated with distress and/or impaired functioning.

Our mental health is a complex combination of experiences, biology,

Figure 1: Percentage of People Reporting 8+ Poor Mental Health Days in Past Month, 2013-2021<sup>1</sup>



<sup>1</sup> Colorado Health Access Survey, 2021, Colorado Health Institute

<sup>2</sup> National Survey on Drug Use and Health, <https://nsduhweb.rti.org/respweb/homepage.cfm>





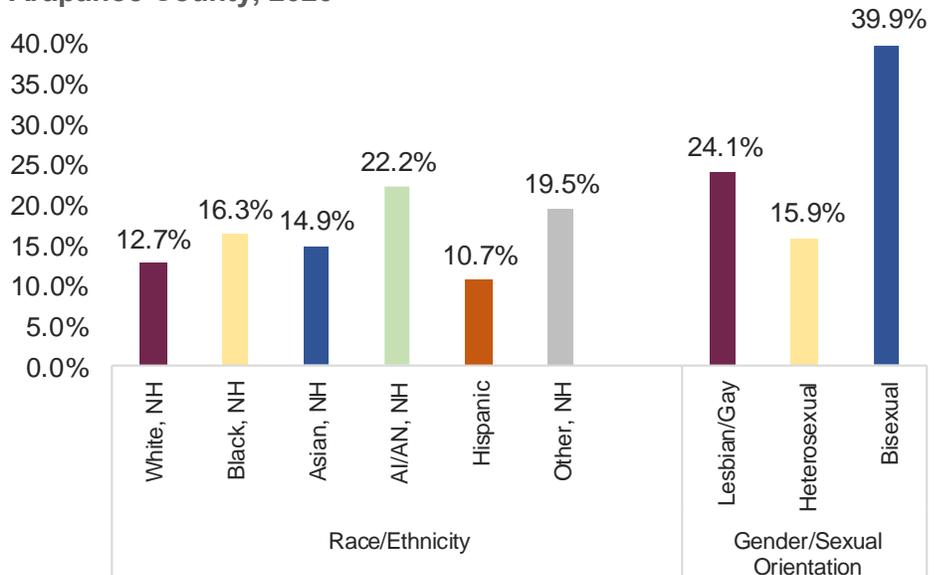
A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.

Arapahoe County

## Our mental health is impacted by a complex combination of experiences, biology, and social conditions including exposure to racism and discrimination.

and social conditions. However, the majority of mental health issues go untreated because people are afraid to talk about them due to shame, misunderstanding, negative attitudes, and fear of discrimination.<sup>3</sup> One's mental health is influenced by many factors. For example, we can see differences in self-reported mental health status by factors such as age, race/ethnicity, income, and educational attainment: all factors that influence people's lives, opportunities, and environments. We also note differences in self-reported mental health by geographic area. Map 1 shows the percentage of people reporting mental health distress (14 or more poor mental health days of the past 30 days) by census tract.

**Figure 2: Percentage of People Reporting 14+ Poor Mental Health Days in Past Month by Race/Ethnicity, Gender/Sexual Orientation, Arapahoe County, 2020<sup>4</sup>**



<sup>3</sup> World Health Organization, [https://www.who.int/health-topics/mental-health#tab=tab\\_1](https://www.who.int/health-topics/mental-health#tab=tab_1)

<sup>4</sup> Behavioral Risk Factor Surveillance System, CDPHE

**Map1: Mental Health Distress (14+ Poor-Mental-Health Days of past 30 Days) by Census Tract, 2020**



Source: CDC Places Data, BRFSS, <https://tchdgis.maps.arcgis.com/apps/MapSeries/index.html?appid=f5225be11217455ebee60274850efb66>



A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.

Arapahoe County

**“...the majority of mental health issues go untreated because people are still afraid to talk about them due to shame, misunderstanding, negative attitudes, and fear of discrimination.”**

Source: Mental Health America, 2021



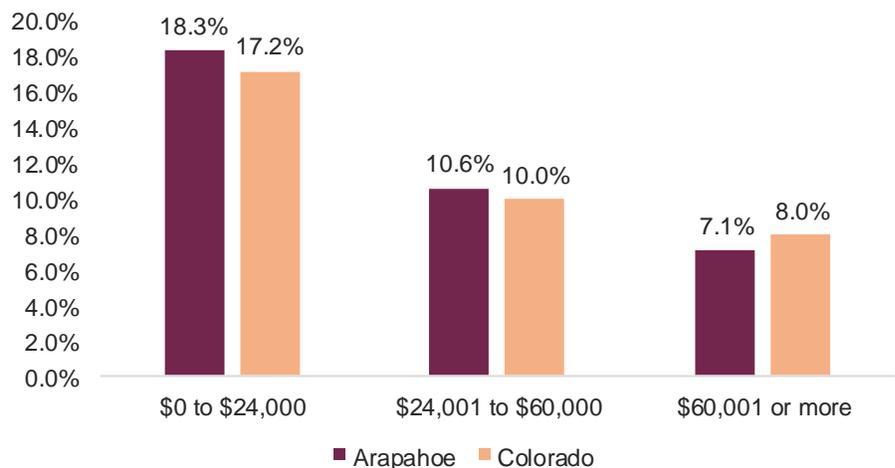
Census tracts are U.S. Census Bureau-designated areas of land with relatively similar populations of people. Darker areas on the map indicate tracts with greater percentages of people reporting mental health distress. We see greater percentages of mental health distress in Sheridan, Englewood, northern Littleton, Dove Valley in Centennial, Aurora, Strasburg, Byers, and Deer Trail (Map 1).

## Pregnancy-Related Depression

While many parents experience some mild mood changes during or after the birth of a child, 20% of women in the U.S. experience more significant symptoms of depression or anxiety, making pregnancy-related depression the most common complication of pregnancy.<sup>5</sup> In Colorado, one in seven pregnant or postpartum women experience pregnancy-related depression and anxiety. While often referred to as postpartum depression, pregnancy-related depression is depression that occurs during pregnancy or after giving birth, including after a pregnancy loss. Parents of every culture, age, income level and race can develop pregnancy related depression and anxiety disorders. While anyone who has been pregnant or given birth may experience these symptoms, parents are at increased risk if they have a history of depression or anxiety, have experienced complications in pregnancy, birth or breastfeeding, do not have supportive social connections or experience financial stress.

In Colorado and in Arapahoe County, more women with lower incomes report postpartum depression (PPD) than women with higher incomes (Figure 3). While nearly one in five (18.3%) low-income women in Arapahoe County report PPD, fewer than one in ten (7.1%) higher income women do. Having a lower income may be associated with higher stress levels, placing these women with new babies at greater risk for postpartum depression. Postpartum depression is also more common among women who report more stress (of various kinds) in their lives in the year before their child was born.<sup>6</sup>

Figure 3: Postpartum Depression by Household Income, 2016-2020



**Women with lower incomes have higher rates of postpartum depression than women with higher incomes.**

PRAMS, Colorado Department of Public Health and Environment

<sup>5</sup> <https://www.postpartum.net/colorado/>

<sup>6</sup> PRAMS, CDPHE

Pregnancy Risk Assessment Monitoring System (PRAMS), CDPHE



A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.

Arapahoe County

**One in three (34%) high school students in Arapahoe County reported feeling so sad or hopeless they stopped doing usual activities almost every day for 2+ weeks during the past 12 months**

Source: Healthy Kids Colorado Survey, 2019, CDPHE

## Adolescent Mental Health

Adolescence is a critical developmental period in which youth grow, explore, learn, and develop important skills that prepare them for adulthood. While most youth navigate this period successfully, others may need additional support to be healthy and thrive.<sup>7</sup>

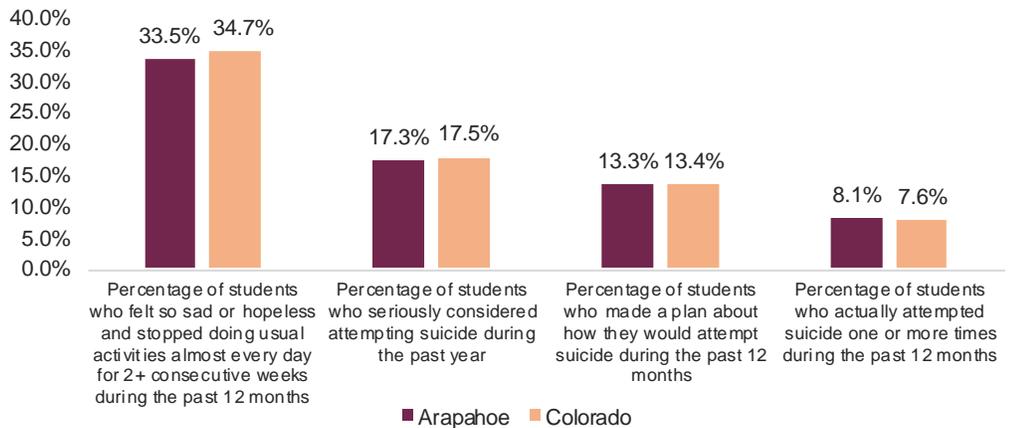
One in five adolescents has had a serious mental health disorder, such as depression and/or anxiety disorder, at some point in their lives. Mood changes are common in adolescents but in some cases they can be a sign of deeper issues. As with mental health disorders in children, those in teens can be diagnosed, treated, and managed.<sup>8</sup>

In 2019, just 71% of Arapahoe County high school students reported having an adult they can go to for help with a serious problem, an important protective factor for positive youth development. One in three youth reported feelings of depression impacting their daily activities, 17% reported seriously considering suicide, and 8% reported that they attempted suicide in the past 12 months (Figure 4). Females and gay, lesbian, or bisexual youth are more likely to consider and actually attempt suicide than males and heterosexual youth (Figure 5); however, males are more likely to die by suicide.

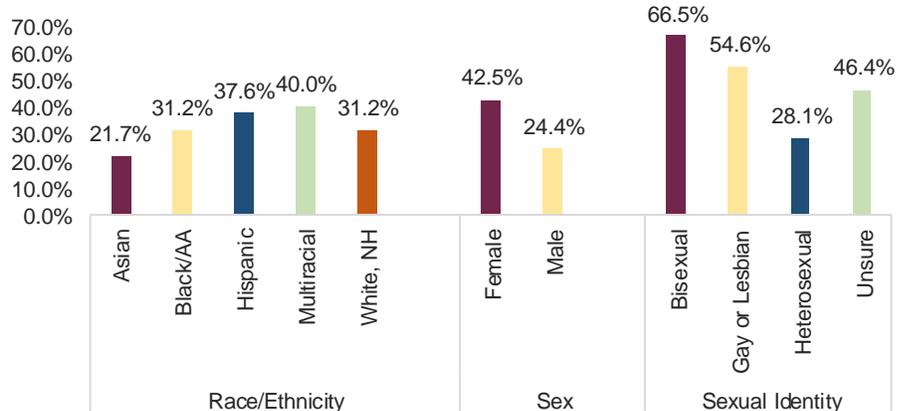
**“Our community needs youth intervention programs focused on safe spaces and trusted adults.”**

Source: Community Mental Health and Suicide Prevention Summit participant, 2022

**Figure 4: Percentage of High School Students Experiencing Mental Health Distress or Suicidal Ideation, 2019<sup>9</sup>**



**Figure 5: Characteristics of High School Students Experiencing Mental Health Distress, Arapahoe County, 2019<sup>9</sup>**



<sup>7</sup> Youth.gov Promoting Positive Adolescent Health Behaviors and Outcomes: Thriving in the 21st Century - PDF

<sup>8</sup> <https://www.hhs.gov/ash/oah/adolescent-development/mental-health/index.html>

<sup>9</sup> Healthy Kids Colorado Survey, CDPHE



A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.

## Arapahoe County

### SUICIDE RISK FACTORS

- previous suicide attempts
- substance abuse
- incarceration
- family history of suicide
- poor job security or low levels of job satisfaction
- history of being abused or witnessing continuous abuse
- being diagnosed with a serious medical condition, such as cancer or HIV
- being socially isolated or a victim of bullying
- being exposed to suicidal behavior

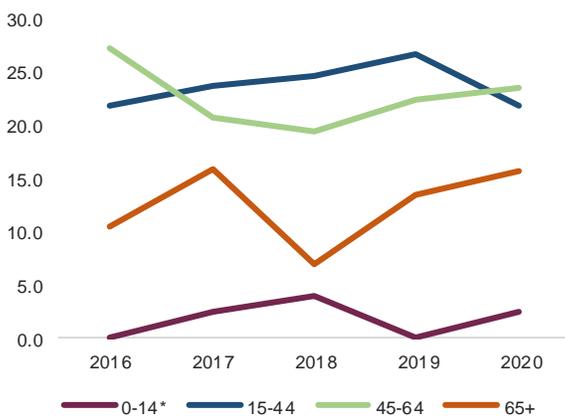
### Suicide

States in the Rocky Mountain West tend to have the highest rates of suicide in the country. In 2019, the suicide rate in Colorado was 22.5 per 100,000 people, the 5th highest rate in the country.<sup>10</sup> Suicide rates differ by age group (Figure 6), race/ethnicity and sex (Figure 7). In 2020, rates increased for adults aged 45 and older as well as youth 0-14. By race/ethnicity suicide mortality rates are highest for American Indian, Alaskan Native people in Arapahoe County.

Suicide is a complex issue. There is no single cause for suicide and many factors can increase the risk for suicide or protect against it. Suicide and suicide attempts cause serious emotional, physical, and community impacts. The good news is that more than 90% of people who attempt suicide and survive never go on to die by suicide.<sup>12</sup> Mental health conditions are often seen as the cause of suicide, but other problems often contribute to suicide. For example, people who have experienced violence, including child abuse, bullying, or sexual violence have a higher suicide risk. Certain aspects of communities and society also influence suicide risk. Being connected to family and community support and having easy access to health care can decrease suicidal thoughts and behaviors.<sup>13</sup>

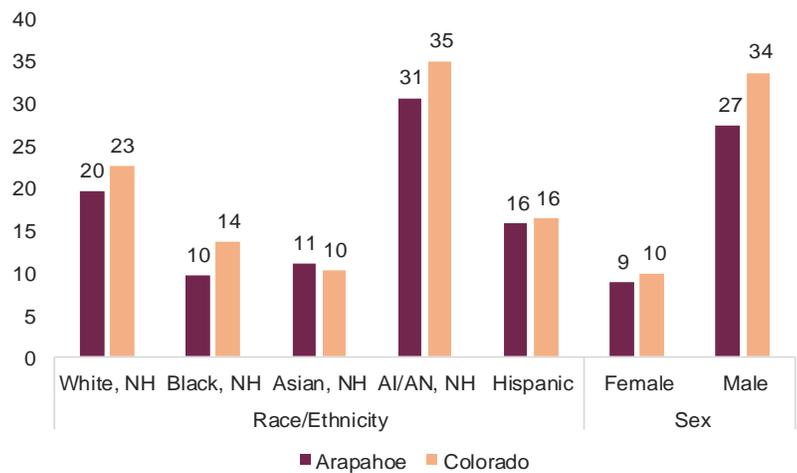
Healthy development in the early years provides the building blocks for lifelong health. However, over 45% of US children and two-thirds of adults have been exposed to at least one Adverse Childhood Experience (ACE)—such as physical or emotional neglect or abuse,

**Figure 6: Suicide Mortality Rates per 100,000, by Age Group, Arapahoe County, 2016-2020**



\* Rates for 0-14-year-olds are suppressed due to low numbers in 2016 and 2019

**Figure 7: Age-Adjusted Suicide Mortality Rates per 100,000, by Race/Ethnicity and Sex, Arapahoe County, 2016-2020<sup>11</sup>**



NH: Non-Hispanic  
AI/AN: American Indian, Alaskan Native

<sup>10</sup> <https://www.cdc.gov/vitalsigns/aces/pdf/vs-1105-aces-H.pdf>

<sup>11</sup> Vital Statistics Branch, Colorado Department of Public Health and Environment

<sup>12</sup> Owens D, Horrocks J, House A. (2002) Fatal and non-fatal repetition of self-harm. Systematic review. Br J Psychiatry. Sep; 181:193-9.

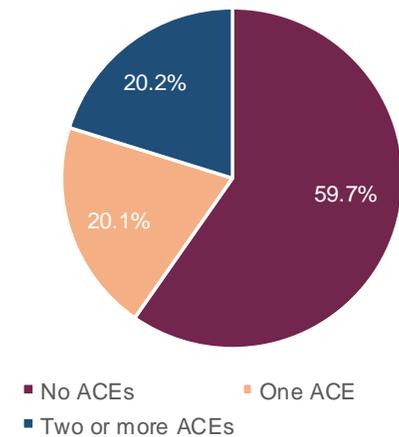
<sup>13</sup> CDC. Preventing multiple forms of violence: A strategic vision for connecting the dots PDF – 775 KB]. (2016) Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.



A healthy community is where emotional and mental health are a priority and services and supports that promote, maintain, and restore mental health are readily available.

Arapahoe County

**Figure 8: Percentage of Colorado Children with ACEs, 2019-2020**



National Survey of Children's Health

<sup>14</sup> National Survey of Children's Health, U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB, 2019-2020)

living with someone with a drug, alcohol or serious mental health problem, the death of a parent, or being exposed to violence or discrimination in the home or community. ACEs can activate the stress-induced fight-or-flight response system in the body. In children, more ACEs and toxic stress—repeated, unmitigated stress—can disrupt regular neurodevelopment and increase the risk for the development of chronic health problems in adulthood as well as mental illness and substance use.<sup>14</sup> In Colorado, 40% of children and youth aged 0-17 have at least one ACE (Figure 8). Expectedly, the number of children with ACEs increases as children age: while only one-quarter of Colorado children aged 0-5 have experienced at least one ACE, half of youth aged 12-17 have experienced at least one ACE.

The Arapahoe County community recognizes that life events and circumstances—such as concern over finances, stress, and isolation—impact one's mental health. Reducing environmental, social, and economic factors that contribute to stress, breaking down stereotypes and stigma associated with mental health disorders, ensuring affordable access to mental health care services, and creating accepting, inclusive and supportive communities will help to bolster mental health for all, leading to higher productivity, safer communities, and optimal health and wellness.

**If you or someone you know is in crisis or needs help dealing with one, call this toll-free number 1-844-493-TALK (8255) or text TALK to 38255 to speak to a trained professional. Visit [coloradocrisiservices.org](https://coloradocrisiservices.org) to learn more.**

## What Our Community Said

- One in twenty (5%) comments related to mental health as either a problem (i.e., poor mental health) in the community or as an important part of a happy, healthy, and thriving person or community (i.e., good mental health).
- 10% of all comments related to mental health specifically noted that stress is a problem.
- Community members specifically noted concern for poor mental health among adolescents and young people.
- Focus group participants, in particular, noted that access to mental health resources and supports makes a difference.
- “We’re all experiencing stress, worry, grief and other emotions, but we may not realize this is to be expected considering how the pandemic is affecting our mental health,” said Glenn Most, executive director at West Pines Behavioral Health.



*A healthy community is where residents are engaged in efforts to prevent the misuse of alcohol, tobacco, and other drugs and where treatment services are affordable, accessible, and culturally appropriate for those who need them.*

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 Tri-County Health Department | 2022 Community Health Assessment  
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*A healthy community is where residents are engaged in efforts to prevent the misuse of alcohol, tobacco, and other drugs and where treatment services are affordable, accessible, and culturally appropriate for those who need them.*

Arapahoe County



## Key Insights

- Substance use is a chronic, relapsing disease with multiple underlying causes.
- Alcohol is the most commonly used substance among teens and adults in Colorado and Arapahoe County.
- Use and misuse of alcohol, marijuana, and tobacco all increase in communities with more retailers and advertisements for substances.
- Impaired driving is responsible for over a third of deaths in fatal car crashes. These deaths are fully preventable.
- Overdose deaths due to opioids are increasing, and there are many actions communities can take to prevent further loss.
- “Just say no” and scare tactics are not effective strategies for preventing youth use of substances.

**Substance use disorder is a chronic, reoccurring, relapsing disease with multiple underlying causes.**

The excessive use or misuse of substances impact the individuals involved, their families, and entire communities. Substance use disorders, including opioid use disorder and alcohol use disorder, are chronic, recurring, relapsing diseases. There are multiple underlying causes and environmental factors that impact the likelihood of developing a substance use disorder as well as its severity and the potential for it to be fatal.

Access to substances and family, peer, and societal attitudes towards substance use greatly impact use, especially among young people. Substance use also shares many of the same risk factors (those that make a person more likely to engage in risky behaviors) and protective factors (those that make a person less likely to engage in risky behaviors) as community violence and suicidality.

## Alcohol and Marijuana

Alcohol is the most commonly consumed substance among adults and teenagers in Colorado. In adults, negative health outcomes more often result from regular heavy use or binge drinking (defined as four or more drinks for women and five or more for men in one sitting). In adolescents, even small amounts of alcohol can have lasting effects on both the structure and function of the still-developing brain, potentially leading to learning difficulties, memory impairments, and long-term addiction.<sup>1</sup> In addition to the direct harms to the individual from excessive use, alcohol consumption also impacts communities through increases in violence, injuries, and impaired driving.

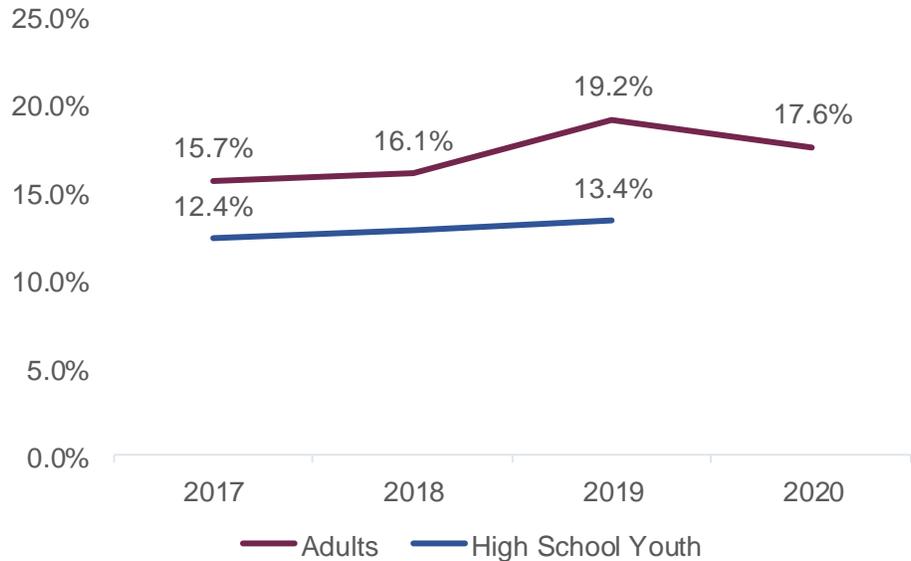
<sup>1</sup> National Institute on Alcohol Abuse and Alcoholism, <https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/underage-drinking>

A healthy community is where residents are engaged in efforts to prevent the misuse of alcohol, tobacco, and other drugs and where treatment services are affordable, accessible, and culturally appropriate for those who need them.

Arapahoe County

About one in six Arapahoe County adults reported binge drinking in 2020. About one in seven high school students in Arapahoe County reported binge drinking in 2019 (Figure 1).

**Figure 1: Percentage of People Reporting Binge Drinking, Adults and High-School-Aged Youth, Arapahoe County, 2017-2020\***



Source: Behavioral Risk Factor Surveillance System, and Healthy Kids Colorado Survey, Colorado Department of Public Health and Environment

\*High school data are only available for odd-numbered years.

Marijuana is the second most commonly consumed substance among Colorado adults following alcohol and the third most commonly consumed substance by teenagers in Colorado, behind alcohol and nicotine. The direct health effects of marijuana on individual consumers are still being studied. However, impacts on communities have been established through secondhand smoke exposure and impaired driving. Like alcohol,

**“Parents have a significant influence in their children’s decision to experiment with alcohol and other drugs. Although it may not seem like it, when parents talk about underage drinking and substance use, their children do hear them.”**

Source: Substance Abuse and Mental Health Administration, <https://www.samhsa.gov/talk-they-hear-you/about>

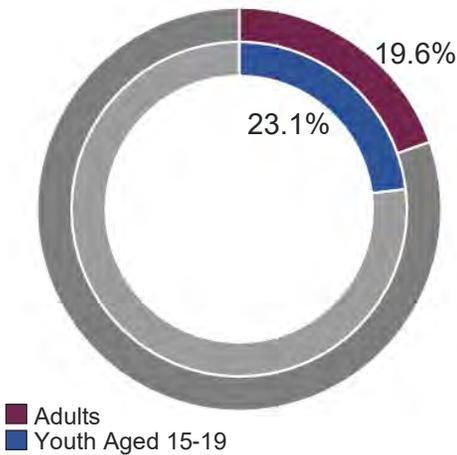


A healthy community is where residents are engaged in efforts to prevent the misuse of alcohol, tobacco, and other drugs and where treatment services are affordable, accessible, and culturally appropriate for those who need them.

## Arapahoe County

**19.6% of adults and 23.1% of teens in Arapahoe County reported current (within the past month) marijuana use.**

**Figure 2: Past 30-Day Marijuana Use, Adults and High School Students, Arapahoe County, 2019-2020\***



Source: Behavioral Risk Factor Surveillance System, and Healthy Kids Colorado Survey, Colorado Department of Public Health and Environment  
\*High school data only available for odd-numbered years.

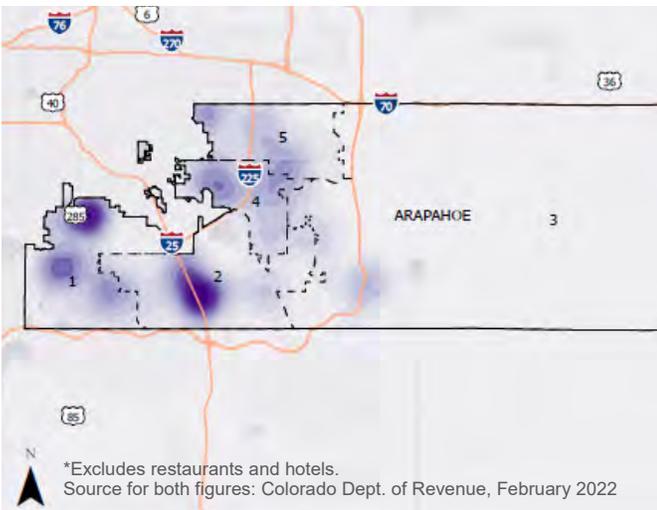
marijuana also negatively impacts the still-developing brain of adolescents, putting young people who use marijuana at greater risk of learning, attention, and memory difficulties; development of mental illness later in life; and long-term addiction.<sup>2</sup>

Since retail sales were legalized in Colorado, use among adults has increased while use among young people has remained steady. About one in five adults and one in four high school students in Arapahoe County reported recent marijuana use in 2019-2020 (Figure 2).

Access to substances impacts community health by making substances more available and establishing use as normal in a community. Many substances are heavily marketed in communities of color and low-income communities, with more outlets and more advertisements in these neighborhoods. Figure 3 shows liquor store density in Arapahoe County; Figure 4 shows areas within the county with the most marijuana licenses.

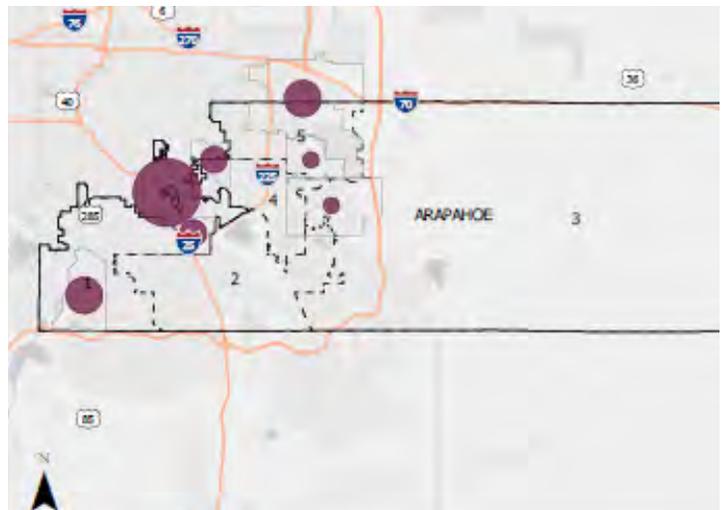
Impaired driving remains a public health concern due to the increased risk of crashes, injuries, and fatalities. Alcohol-impaired driving has been a well-publicized danger with many public awareness and law enforcement campaigns, leading to a dramatic decrease of alcohol-impaired driving over several decades. Marijuana-impaired driving remains a less-known risk, and as marijuana use increases in Colorado after the legalization of retail stores in 2014, marijuana-impaired driving has increased as well. There are also common misconceptions that marijuana makes one a better driver, though research has documented that marijuana use impairs motor skills and cognitive functioning.<sup>3</sup> Reducing impaired driving is an important step to make roads and drivers safer.

**Figure 3: Density of Stores with Liquor Licenses,\* Arapahoe County, 2022**



\*Excludes restaurants and hotels.  
Source for both figures: Colorado Dept. of Revenue, February 2022

**Figure 4: Marijuana Licenses, by Zip Code, Arapahoe County, 2022**



<sup>2</sup> National Institute on Drug Abuse. <https://teens.drugabuse.gov/drug-facts/marijuana>

<sup>3</sup> National Highway Traffic Safety Administration, <https://www.nhtsa.gov/risky-driving/drug-impaired-driving>

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## Arapahoe County

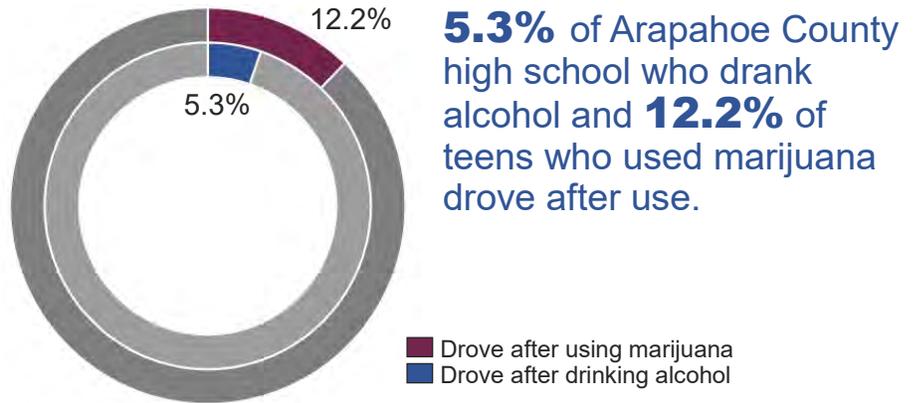
**Over 10,000 people lost their lives in alcohol-impaired driving crashes in the United States in 2019. Each one of these deaths was preventable.**

**Alcohol, marijuana, opioids, and other substances impair one's ability to drive safely.**

One in twenty (5.3%) Arapahoe County students who used alcohol in 2019 reported driving after drinking and more than one in ten (12.2%) who used marijuana reported driving after consuming marijuana (Figure 5). While driving after marijuana use among high school students has been decreasing, this is still dangerously high. Impaired driving is also responsible for slightly more than one-third of fatal crashes across the state and in Arapahoe County (Table 1). While arrests of impaired drivers have decreased over the last several years, the number of impaired-driving fatal crashes and the number of deaths resulting from those crashes have increased. The full reasons for these differences are unknown; they may be due to changes in enforcement practices, treatment and diversion programs in lieu of arrest, or changes in driving behaviors.

Source: National Highway Traffic Safety Administration, <https://www.nhtsa.gov/risky-driving/drunk-driving>, <https://www.nhtsa.gov/risky-driving/drug-impaired-driving>

**Figure 5: Driving After Consuming Alcohol and Marijuana among High School Students, Arapahoe County, 2019**



Source: Healthy Kids Colorado Survey, Colorado Department of Public Health and Environment

**Table 1: Law enforcement arrests for driving under the influence (DUI) and impaired-related fatal crashes in Arapahoe County, 2017-2020**

	DUI Arrests by Arapahoe County Law Enforcement Agencies*	Impaired-Driving-Related Fatal Crashes (% of all fatal crashes)	Deaths in Impaired-Driving Related Crashes (% of all deaths in fatal crashes)
2017	1,889	15 (35.7%)	16 (35.5%)
2018	1,628	16 (35.5%)	16 (34.0%)
2019	1,346	11 (35.5%)	14 (40.0%)
2020	985**	18 (36.7%)	21 (39.6%)

\*Includes DUI arrests from the following law enforcement agencies, which may include some arrests in other counties based on agency jurisdiction: Arapahoe County Sheriff's Office (includes the City of Centennial), Aurora Police Department, Bow Mar/Columbine Valley Police Department, Cherry Hills Village Police Department, Englewood Police Department, Glendale Police Department, Greenwood Village Police Department, Littleton Police Department, Sheridan Police Department. Does not include Colorado State Patrol arrests that occurred in Arapahoe County.

\*\*Response to the COVID-19 pandemic beginning in 2020 led to temporary closures of restaurants and bars, fewer people out on the roads, and fewer arrests for all infractions to reduce physical crowding in jails and booking facilities. These data should be considered an anomaly and not indicative of an actual reduction in impaired driving behavior.

Sources: Colorado Department of Public Safety and Colorado Department of Transportation

A healthy community is where residents are engaged in efforts to prevent the misuse of alcohol, tobacco, and other drugs and where treatment services are affordable, accessible, and culturally appropriate for those who need them.

Arapahoe County

**“[We need] more mental health support, more sobriety support groups.”**

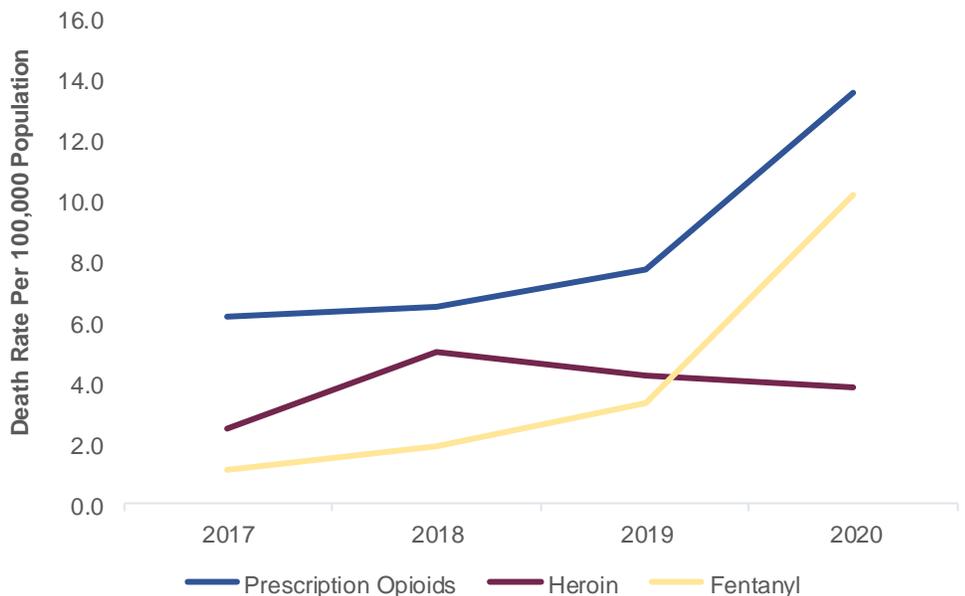
Source: Tri-County Health Department, CHA Community Engagement Process, 2021

### Opioids

Over 20 million Americans struggle with addiction and, unfortunately, only about 10% receive treatment for their substance use disorder.<sup>4</sup> Fragmentation in the healthcare system, lack of easy access, inability to pay, stigma, and too-few culturally-appropriate treatment options all combine to increase the barriers faced by those seeking treatment. In the United States, over 100,000 people died from opioid overdoses from April 2020 to April 2021, the largest number ever in a one-year period. Colorado and Arapahoe County have not been immune to this rise in overdose deaths. It is unknown if this rise in deaths is due to an increase in use, a lower likelihood to engage with healthcare providers during the COVID-19 pandemic, or the rise of fentanyl – a synthetic opioid 50- to 100-times more potent than morphine often included in other drugs without the individual consumer’s knowledge – in the drug supply. The death rate from all opioids (including prescription opioids, heroin, and fentanyl) has doubled in Arapahoe County from 2017-2020, while the death rate specifically due to fentanyl increased almost 9-fold in that same time period.

Individuals and communities can take steps to reduce overdose deaths, including safely disposing of medications at a medication drop-off site; learning to use and carrying naloxone (NARCAN®), an opioid-agonist medication that can reverse the effects of an opioid overdose; advocating for improved access to and affordability of inclusive treatment options; and speaking openly about the disease of substance use disorder (addiction) to reduce stigma.

**Figure 6: Age-adjusted death rate per 100,000 population for prescription opioids, heroin, and fentanyl, Arapahoe County, 2017-2020**



The prescription opioids category includes deaths due to fentanyl. Source: Vital Statistics Program, Colorado Department of Public Health and Environment

<sup>4</sup> Shatterproof, <https://www.shatterproof.org/learn/addiction-basics/addiction-in-america>

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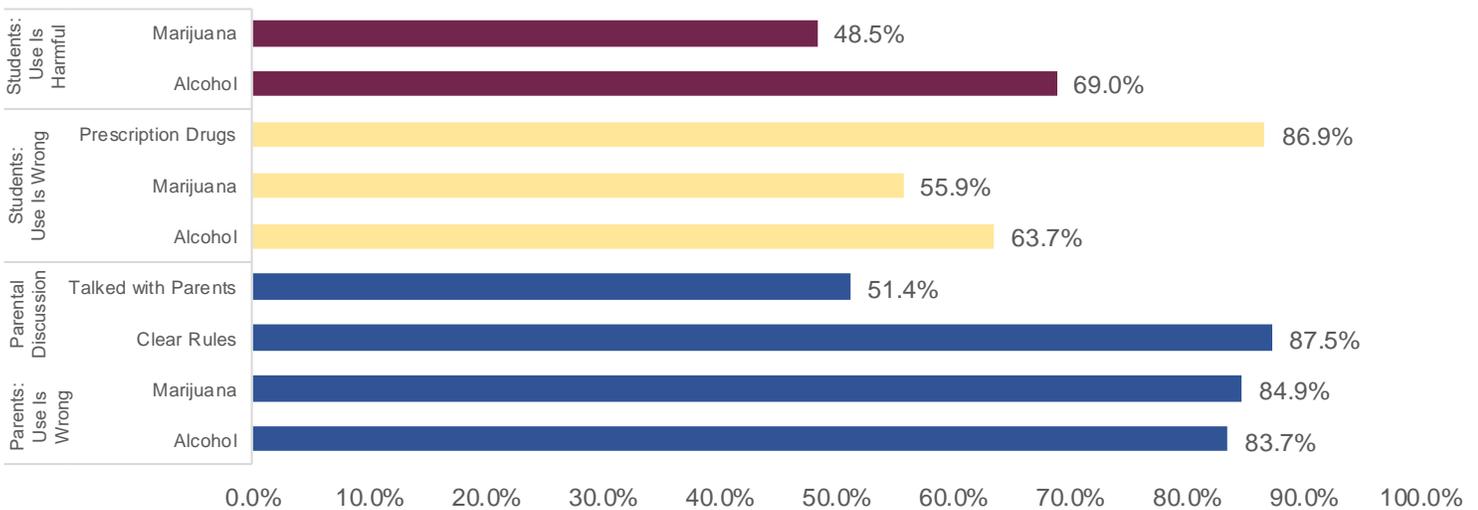
Arapahoe County

## Attitudes about Substances Among Young People

While scare tactics and “just say no” educational strategies have proven ineffective in reducing use among young people, perceptions of harm and perceived acceptability among family and peers do influence the likelihood of young people experimenting with substances. Comprehensive health education and life skills are more effective than scare tactics to influence these factors and decrease use.

Important steps to protect young people from experimenting with and misusing substances include having clear rules about substances in the home; establishing opportunities for young people to discuss substances with parents, guardians, and other trusted adults; and creating cultural norms that do not favor acceptability of substances. In Arapahoe County, young people believe their parents think use of substances is wrong and have clear rules in their homes, but only half have talked with their parents or guardians about substances. Most young people also believe it is wrong to use prescription drugs without a prescription, but fewer believe it is wrong for teens to use alcohol or marijuana (Figure 7).

**Figure 7: Percentage of High School Students with Selected Protective Factors, Arapahoe County, 2019**



Source: Healthy Kids Colorado Survey, 2019, Colorado Department of Public Health and Environment.

**If you believe you or someone you know may need help with substance misuse or abuse, call 1-844-493-8255 to speak for free with a trained professional and receive resources to help, including referrals to treatment.**

### What Our Community Said

- Nearly one in three (30%) comments from community members related to substance use were focused on alcohol and tobacco/vaping.
- Both young people and monolingual-Spanish-speaking parents identified substance use and easy access to substances as top health concerns for teens.
- Community members acknowledged that prevention as well as treatment services are needed to address substance use successfully.
- Individuals in substance use disorder cited barriers such as lack of affordability, difficulty in navigating the system, and treatment environments that are unwelcoming or not culturally appropriate as barriers to receiving treatment.



*In a healthy community, all people have access to high quality, culturally competent reproductive and sexual health services that support their needs and life goals.*



# Sexual and Reproductive Health

*In a healthy community, all people have access to high quality, culturally competent reproductive and sexual health services that support their needs and life goals.*

Arapahoe County



## Key Insights

- Reproductive and sexual health is an important part of overall health.
- Approximately one in three (38%) pregnancies in Arapahoe County are unintended.
- While most women use highly effective methods of contraception, such as long-acting reversible contraceptives or sterilization, the most common method among high school students is condoms, which are only effective when used consistently and correctly.
- Chlamydia and syphilis cases are on the rise in Arapahoe County, particularly among men who have sex with men.

**Between 2016-2020, 37% of Colorado women stated that their pregnancy was unintended—that is, mistimed or unwanted.**

Source: Pregnancy Risk Assessment Monitoring System, Colorado Department of Public Health and Environment

The Centers for Disease Control and Prevention (CDC) considers family planning one of the ten great public health achievements in the 20th century.<sup>1,2</sup> The ability to become pregnant when wanted and receive sexual and reproductive health services improves the lives and health of women and men, children, families, and has both social and economic benefits to people and communities.<sup>1,3</sup> Family planning and sexual and reproductive health services reduce the number of unintended pregnancies. Whereas an intended pregnancy is a pregnancy that, at the time of conception, was planned or wanted and the timing was chosen by the parent(s), unintended pregnancies are mistimed or unwanted at the time of conception. Unintended pregnancies can increase the risk of negative health outcomes for mother and child, including poor maternal mental health, inadequate/delayed prenatal care, premature birth, low birth weight, low rates of breastfeeding, reduced quality of the mother-child relationship, less than optimal child development, and the delaying of educational or professional opportunities by a caregiver (often the mother). When women and their partners are aware of choices to manage their reproductive and sexual health and have access to a wide range of contraceptive methods, they are better able to plan as well as space their births. This leads to positive health, social and economic outcomes for women, families, and communities.

## Family Planning

Between 2016-2020 in Arapahoe County, as well as in Colorado, about two of every five (38%) mothers who gave birth stated their pregnancy was unintended. Statewide, unintended pregnancy is significantly more common among teenage mothers aged 15-19 years (75%) compared with mothers aged 20-30 years (44%) and mothers aged 31+ years (29%).<sup>4</sup>

<sup>1</sup> <https://www.healthypeople.gov/2020/topics-objectives/topic/family-planning#one>

<sup>2</sup> <https://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>

<sup>3</sup> <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm4847a1.htm>

<sup>4</sup> Pregnancy Risk Assessment Monitoring System, Colorado Department of Public Health and Environment





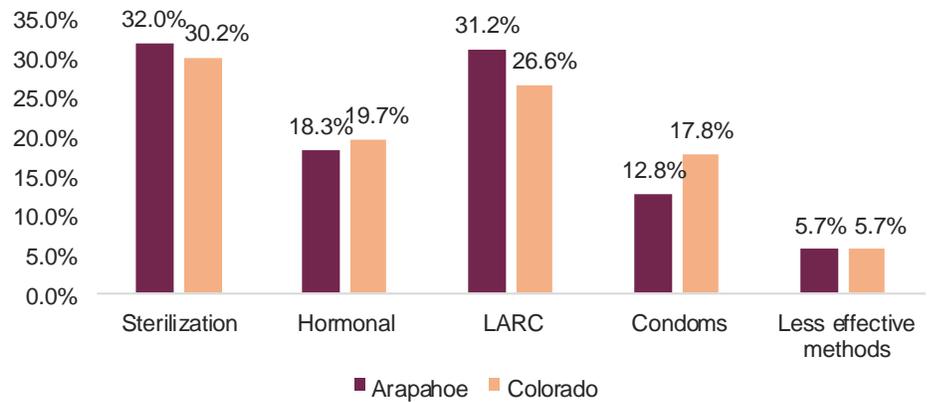
# Sexual and Reproductive Health

In a healthy community, all people have access to high quality, culturally competent reproductive and sexual health services that support their needs and life goals.

Arapahoe County



**Figure 1: Method of Contraception Used by Females of Reproductive Age Who Did Not Want to Become Pregnant, 2019**

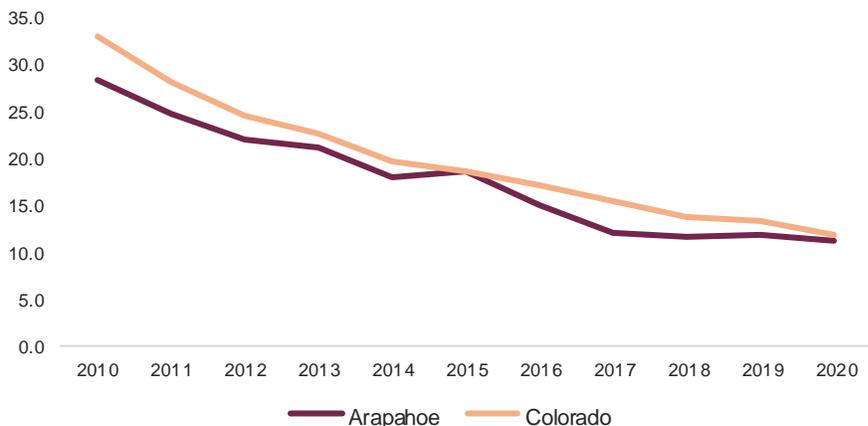


\*LARC: Long-acting reversible contraception and includes intrauterine devices and contraceptive implants  
Source: Behavioral Risk Factor Surveillance System, Colorado Department of Public Health and Environment

In 2019, the majority of women in Arapahoe County using birth control were using a highly effective method: 21% relying on sterilization (theirs or their partners') and 31% using Long-Acting Reversible Contraception (LARCs).<sup>5</sup> Figure 1 shows contraceptive use by method type. Women who use a birth control method that best suits their needs are more likely to use it consistently and effectively and, thus, less likely to become pregnant.

Preventing an unintended pregnancy can profoundly impact adolescent quality of life, decrease the risk of poor infant health outcomes, and reduce the risk of long-term dependence on public assistance. The Colorado Family Planning Initiative (CFPI), launched statewide in 2008, continues to support access to low- or no-cost long-acting reversible contraception (LARC) and other highly effective contraceptive methods for women. CFPI has contributed to a 60.4% decrease in fertility rates among teens aged 15-19 years in Arapahoe County during 2010-2020 (Figure 2). During the same time period, fertility rates for all women of reproductive age also declined in Arapahoe County (by 19%) and Colorado (by 21%).<sup>6</sup>

**Figure 2: Trends in Fertility Rates for Youth Aged 15-19 Years, per 1,000 population, 2010-2020**



Source: Vital Records Program, Colorado Department of Public Health and Environment

## Decrease in teen fertility (2010 to 2020)

**Arapahoe County  
60.4% Decrease**

Source: Vital Records Program, Colorado Department of Public Health and Environment

<sup>5</sup> BRFSS, Colorado Department of Public Health and Environment

<sup>6</sup> Vital Records Program, Colorado Department of Public Health and Environment





# Sexual and Reproductive Health

In a healthy community, all people have access to high quality, culturally competent reproductive and sexual health services that support their needs and life goals.

Arapahoe County

## Healthy People 2030 Goal:

### Reduce sexually transmitted infections and their complications and improve access to quality STI care.

Source: Healthy People 2030, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services (HHS)

One-quarter (25.7%) of the high school students in Arapahoe County surveyed in 2019 reported having recent sexual intercourse (within the past three months).<sup>7</sup> Most (80.2%) of these sexually-active students reported using some form of contraception. The most common form of contraception was condoms (56.6%) which must be worn properly and consistently to be effective and preventing pregnancy as well as prevent the transmission of sexually transmitted infections. Contraception use was consistently reported by students of all ages, races/ethnicities, and sexual identities. Social pressure to engage in sexual intercourse can be substantial for adolescents who may be exploring their own identities and learning about safe, consensual, healthy relationships. In 2019, 8.6% of high school students in Arapahoe County reported making sexual comments, jokes, gestures or looks at someone when they knew they were unwanted.<sup>7</sup> In addition, 6.9% of students reported being forced into sexual intercourse when they did not want to engage.<sup>7</sup> Females (11.1%), gay or lesbian (20.1%), bisexual (19.1%) were more likely to report unwanted sexual intercourse than males (2.9%) or heterosexual (5.0%) youth.

## Sexually Transmitted Infections

Sexually transmitted Infections (STIs) are spread from one person to another through intimate physical contact or sexual activity (whether vaginal, oral, or anal sex). STIs can also be transmitted from infected pregnant women to their babies. Sexually active people can reduce their risk of getting an STI by using condoms or engaging a partner who does not have an STI. Chlamydia and gonorrhea are the most common STIs. Many men and most women with gonorrhea or chlamydia infection do not have symptoms, but still can experience complications that could lead to infertility.

## Decrease in Gonorrhea (2016 to 2020)

Arapahoe County  
**1% Decrease**

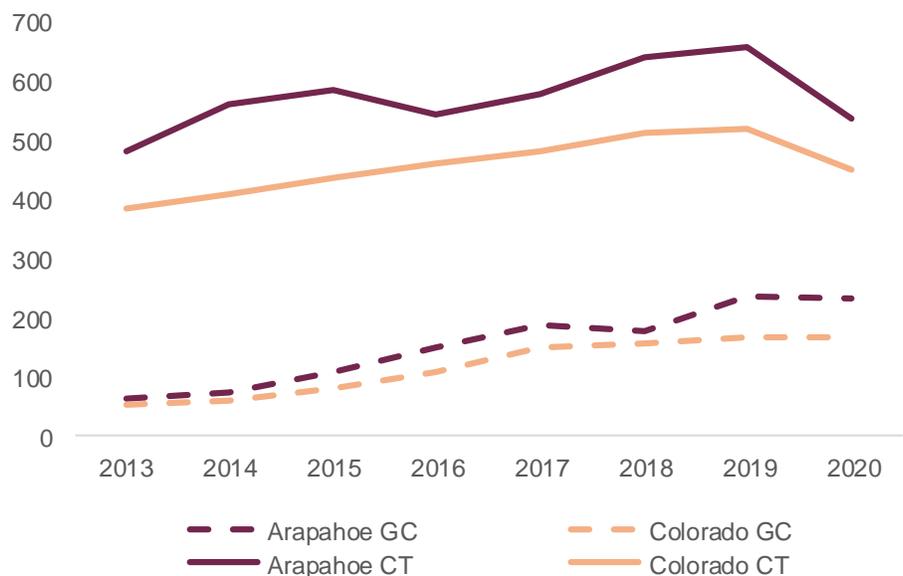
## Increase in Chlamydia (2016 to 2020)

Arapahoe County  
**55% Increase**

## Increase in Syphilis (2016 to 2020)

Arapahoe County  
**131% Increase**

Figure 3: Trends in gonorrhea rates (GC) and chlamydia rates (CT), per 100,000 population, 2013-2020



<sup>7</sup> Healthy Kids Colorado, CDPHE

Source: STI/HIV/Viral Hepatitis Branch, Colorado Department of Public Health and Environment



# Sexual and Reproductive Health

In a healthy community, all people have access to high quality, culturally competent reproductive and sexual health services that support their needs and life goals.

Arapahoe County

**“We [need to] do everything possible to help our young people learn about healthy habits in nutrition but also a life free of substances and a knowledge of where to go to be sexually healthy.”**

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

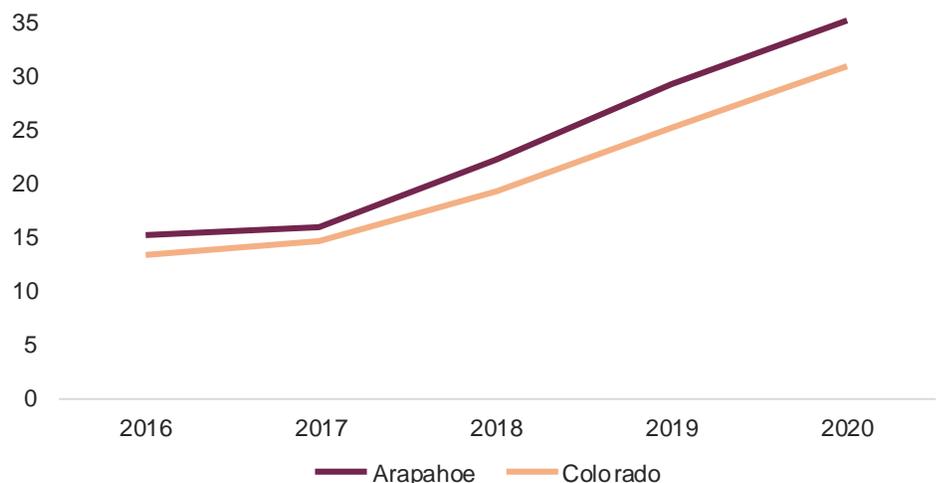
Figure 3 show the trends in rates of chlamydia and gonorrhea between 2013 and 2020. Overall, rates of both diseases increased in Colorado and Arapahoe County, and it is unclear if the decline in chlamydia in 2020 was related to less access to health care or testing due to the COVID-19 pandemic.<sup>8</sup> Also notable is that rates in Arapahoe County consistently exceeded the average rates statewide. While rates have increased slightly for chlamydia, rates of gonorrhea diagnosis, for which increasing antibiotic resistance is a growing concern, have increased more rapidly. About half of chlamydia and gonorrhea infections occur among persons aged 15-24 years.

Figure 4 shows trends in syphilis infections between 2016 and 2020. Rates have increased sharply in Arapahoe County and Colorado since 2016, surging 131% and 130% respectively. In Arapahoe County, 60% of syphilis infections occur among persons aged 25-39 and 84% are male.<sup>9</sup> Studies suggest the increased incidence of syphilis infections is due to several behavior and social factors, particularly among young men who have sex with men (MSM) populations, including less condom use because of differing perceptions of HIV (Human-Immunodeficiency Virus) risk and advances in HIV prevention and treatment.<sup>10</sup>

Since 2016, rates of newly diagnosed Human-Immunodeficiency Virus (HIV) have decreased in Colorado and in Arapahoe County: decreasing by 28% in the state (from 7.7 to 5.6 per 100,000 people) and 9% in Arapahoe County (from 10.2 to 9.3 per 100,000 people).<sup>9</sup> HIV can lead to acquired immunodeficiency syndrome (AIDS) if not treated. There is no cure for HIV or AIDS, but antiretroviral therapy (ART) is available and can significantly extend the lives of HIV-infected people as well as reduce the risk that the virus passes to others.

Ensuring easy, affordable access to sexual and reproductive health services, including family planning and STI testing, increases the likelihood that people of all ages are healthy and happy, and that all people of reproductive age are able to pursue their educational, professional, and wellness goals on their own timelines.

**Figure 4: Trends in newly diagnosed Syphilis infection, rates per 100,000, 2016-2020**



Source: STI/HIV/Viral Hepatitis Branch, Colorado Department of Public Health and Environment

<sup>8</sup> [https://www.ajpmonline.org/article/S0749-3797\(21\)00217-8/fulltext](https://www.ajpmonline.org/article/S0749-3797(21)00217-8/fulltext)

<sup>9</sup> STI/HIV/Viral Hepatitis Branch, Colorado Department of Public Health and Environment

<sup>10</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6798162/>



## Access to Mental and Physical Health Care



*A healthy community is where all people, regardless of their income, can access high quality health care.*



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Arapahoe County, Colorado



# Access to Mental and Physical Health Care

*A healthy community is where all people, regardless of their income, can access high quality health care.*

Arapahoe County



## Key Insights

- The COVID-19 pandemic changed access to care needs and usage patterns as access to testing services, vaccination appointments, and in-person and/or telehealth routine and specialty appointments became more important to community members.
- Cost remains a primary reason people go without care or services.
- Telehealth services have become an increasingly important way in which people access care, but not everyone has access to affordable telehealth services nor the literacy or technology to use it.
- Specialty care, oral health care, and mental and behavioral health care services are less utilized and less accessible than primary physical health care.

**Being able to afford the mental and physical health services needed to be healthy is one of the most important health problems identified by our community members, acknowledged as a basic human need, along with shelter, food, and clothing.**

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

The COVID-19 pandemic created unprecedented changes to the US health care environment in terms of access to physical and mental health care, health care utilization, health care delivery, and social and economic factors. The pandemic caused social changes resulting in loss of job-based health insurance coverage, loss of job and income or income reduction, and increased need for mental health care. The pandemic caused shifts in health care delivery resulting in fewer people going to see their health care provider and a dramatic increase in telehealth visits as health systems overcame barriers to providing telehealth visits. Despite losses in job-based health insurance coverage, Colorado's overall uninsured rate did not increase even as more people qualified for Medicaid coverage; however, the rate of uninsured in Arapahoe County did increase slightly in 2021. The COVID-19 pandemic highlighted the continued importance of health care insurance coverage and equitable access to care as a critical need in our communities and that the individuals most in need of care often are those without coverage. Being able to afford the physical and mental health services needed to be healthy continues to be identified as one of the most salient health problems identified by Arapahoe County community members in both the 2018 and 2021 TCHD Community Input surveys.



# Access to Mental and Physical Health Care

A healthy community is where all people, regardless of their income, can access high quality health care.

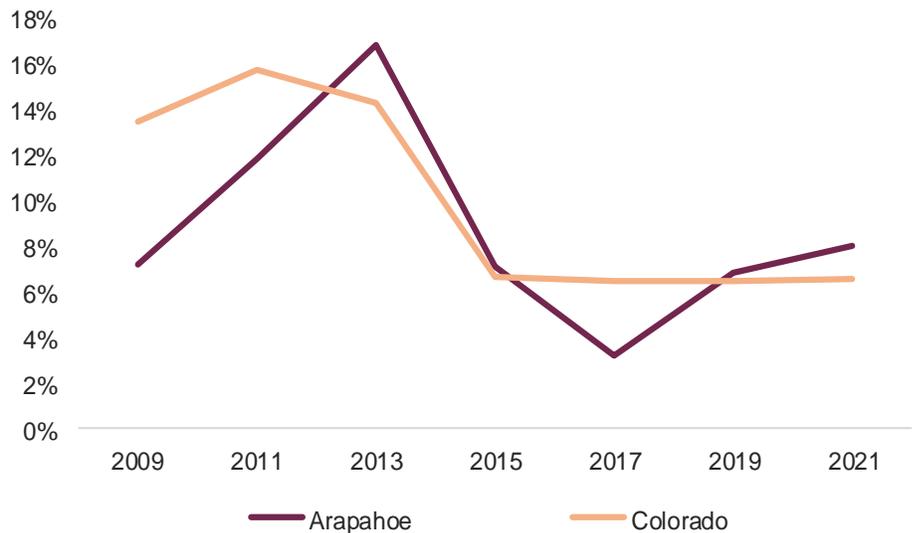
## Arapahoe County

**“As someone with immigrant parents, I know how much my parents struggle for health insurance. They’re scared to go to the hospital because of the high prices; they can be super sick, but they don’t know any doctors at low-cost or actually any medical assistance for people without insurance or Medicaid.”**

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

Having health insurance is the main way people pay for health services. There are two primary sources of health insurance: private insurance, usually provided/purchased through employers, and public insurance, which covers older Americans (Medicare), low-income and disabled Americans (Medicaid) and low-income children and pregnant women in Colorado (Child Health Plan Plus known as CHP+). As shown in Figure 1, the percentage of people without health insurance in Arapahoe County steadily declined from 2013 to 2017, but has since been rising. The sharp decline in the percentage of uninsured from 2013 to 2017 was largely due to the implementation of the 2012 Affordable Care Act (Figure 1). Over 11% of Arapahoe County respondents from the community survey and focus groups identified access to physical and mental health care services as a health issue and need.

Figure 1: Percent of Individuals without Health Insurance, 2009-2021

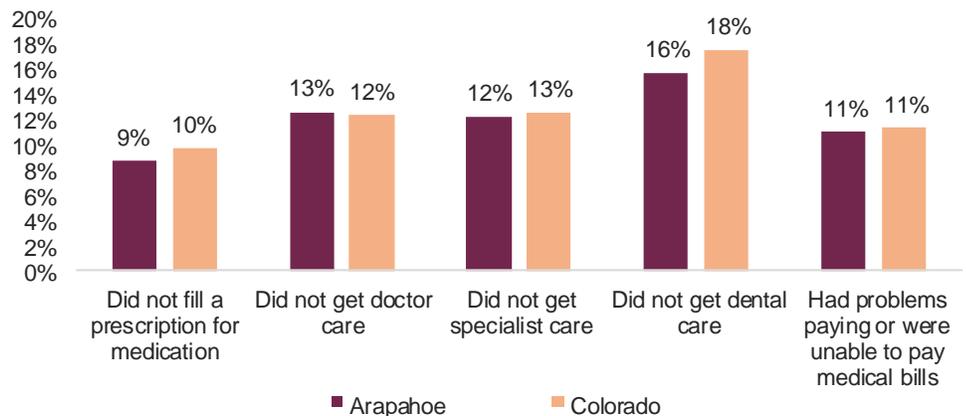


Source: Colorado Health Access Survey 2021, Colorado Health Institute

**“[We need to] proactively be out in the community to prevent health problems before they get critical and people come to the emergency room.”**

Tri-County Health Department, CHA Community Engagement Process, 2021

Figure 2: Percent of people unable to obtain certain types of care due to cost in past 12 months (regardless of insurance status), 2021



Source: Colorado Health Access Survey 2021, Colorado Health Institute





# Access to Mental and Physical Health Care

A healthy community is where all people, regardless of their income, can access high quality health care.

Arapahoe County

**“La salud es uno de los sectores más importantes en la vida del ser humano y hasta el momento es lo que más le preocupa a las personas porque no tienen acceso a un servicio de calidad y a bajo costo.”**

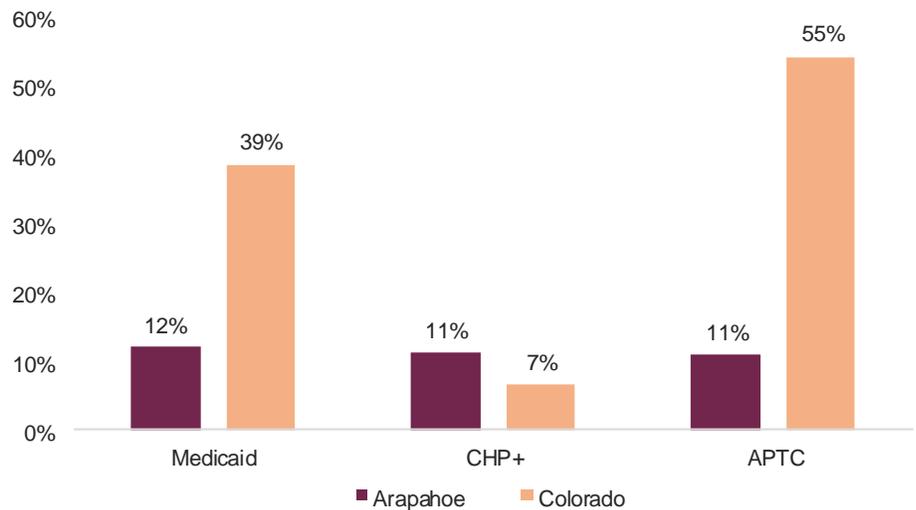
*“Health is one of the most important parts of a human’s life and even now it is what most worries people because they don’t have access to high-quality, low-cost services.”*

Source: Tri-County Health Department, CHA Community Engagement Process, 2021

Cost of health care continues to be a persistent issue identified by community members. Even those with health insurance coverage struggle to pay for services. Insurance varies in what it will cover and the level of coverage. People may need to purchase supplemental (additional) health insurance coverage for services like hospital care, dentistry, and vision care. In addition, the premium (the regular payment people make to pay for their coverage), deductibles and co-pays can lead to additional, high out-of-pocket costs, which can force some people to choose between services, medications, or other basic necessities. Figure 2 indicates the proportion of people who were unable to obtain certain types of health care because of cost.

Not everyone who is eligible for public health insurance is enrolled in a plan. Nearly all adults ages 65+ are enrolled in Medicare, but fewer of those who are eligible for Medicaid or CHP+ are enrolled. Figure 3, below, shows those eligible but not enrolled in three health coverage plans.

**Figure 3: Percent of people ages 0-64 who were eligible but not enrolled in three health coverage plans—Medicaid, CHP+, and advance premium tax credits (APTC), 2019.**



Colorado Health Access Survey 2021, Colorado Health Institute

Health care utilization shifted drastically during the COVID-19 pandemic. The pandemic initially caused a drastic reduction in non-essential procedures, and concerns over potential exposure kept people from accessing care and resulted in an overall decline in health care utilization, especially among the uninsured. Although overall health care utilization declined during the pandemic, use of mental health services increased. The way in which health care is delivered also drastically changed, as health systems and providers made a dramatic shift to telehealth service delivery. Figure 4 shows health care utilization in Arapahoe County and Colorado, and Figure 5 shows the dramatic increase in telehealth visits over time.



# Access to Mental and Physical Health Care

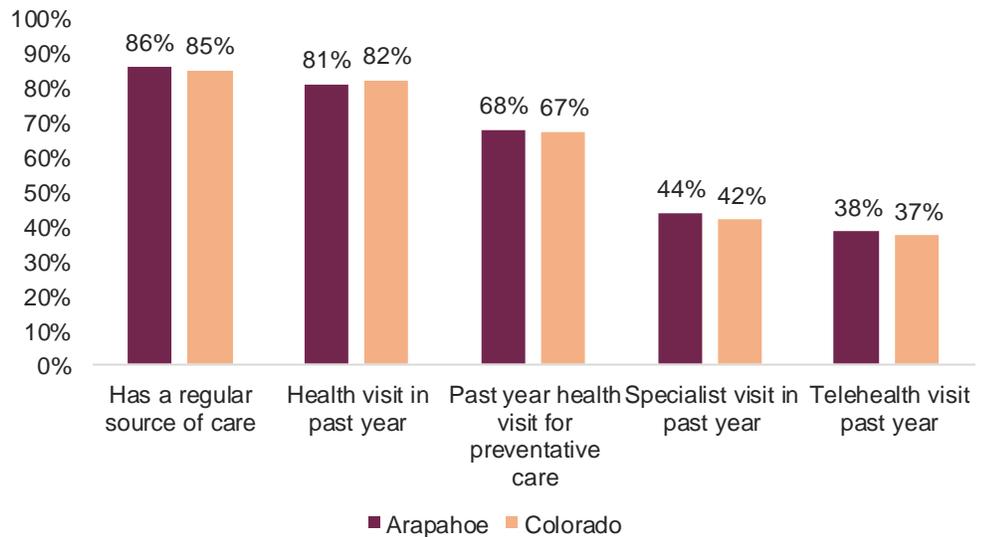
A healthy community is where all people, regardless of their income, can access high quality health care.

## Arapahoe County

**“Access to health care has... decreased since the pandemic, non-COVID care is harder to access and takes more time to resolve.”**

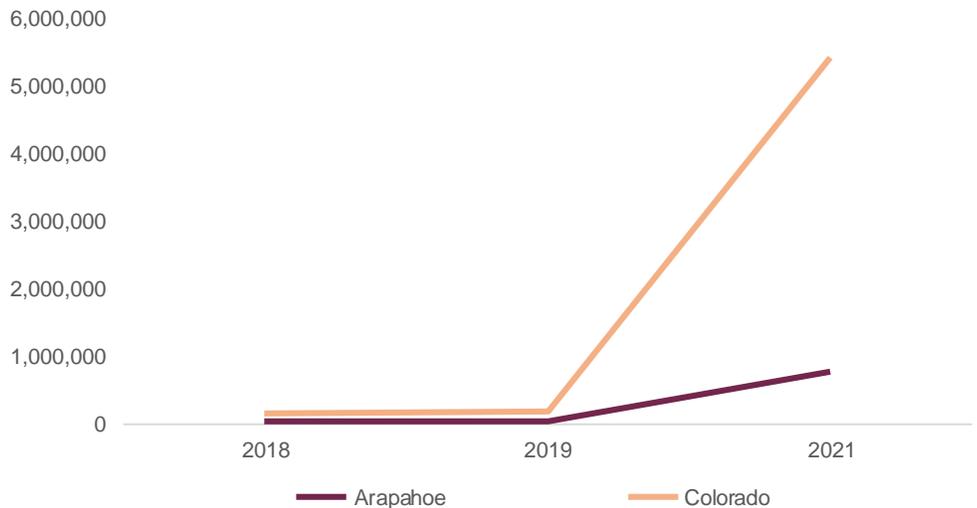
Source: Tri-County Health Department, CHA Community Engagement Process, 2021

**Figure 4: Health Care Utilization, Arapahoe County & Colorado, 2021**



Source: Colorado Health Access Survey 2021, Colorado Health Institute

**Figure 5: Number of Telehealth Services Rendered, Arapahoe County and Colorado, 2018-2021**



Source: Center for Improving Value in Healthcare (CIVHC)

Almost a quarter of Arapahoe County residents ages 5 and older (23.5%) have poor mental health, which represents an increase by over 10% from the same measure in 2019. Mental health was an important issue prior to the COVID-19 pandemic, but became the second health crisis during the pandemic. In 2021, 12.6% of Arapahoe County residents ages 5 and older reported not being able to get mental health care when they needed it in the past 12 months (Figure 6). While more people were reporting poor mental health during the pandemic, they also reported an increased use in mental health care utilization (Figure 7).





# Access to Mental and Physical Health Care

A healthy community is where all people, regardless of their income, can access high quality health care.

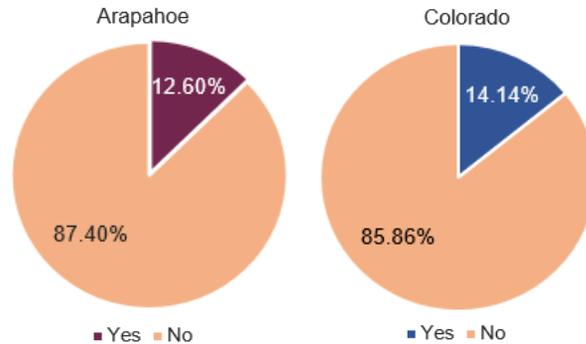
## Arapahoe County

**“La salud mental es un problema en la comunidad y es uno de los médicos más caros casi nadie tiene acceso.”**

*“Mental Health is a community problem and it’s one of the most expensive types of care – almost no one has access.”*

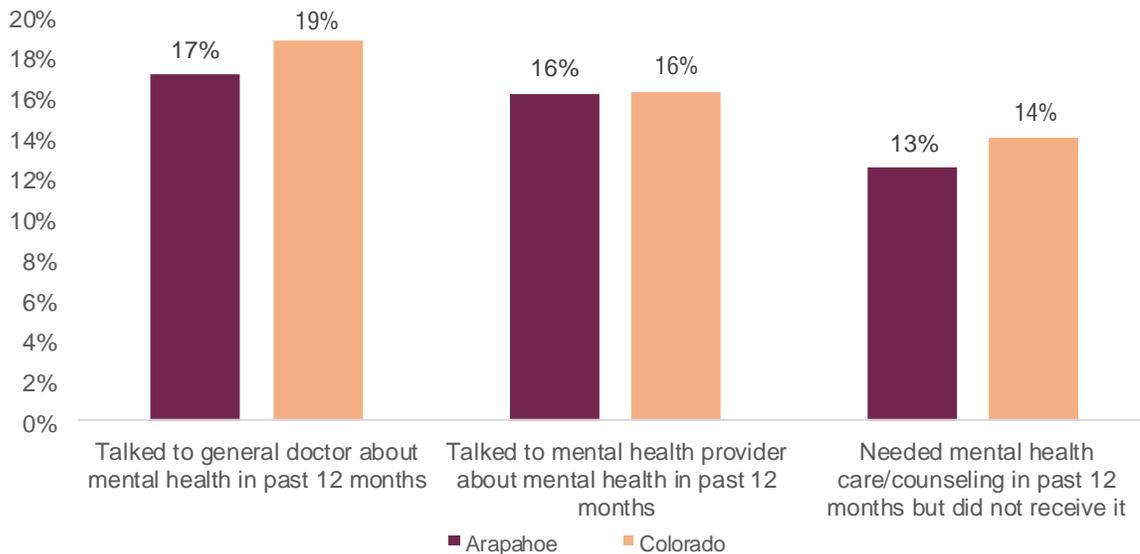
Source: Tri-County Health Department, CHA Community Engagement Process, 2021

Figure 6: Estimated number of people ages 5 and older who needed but didn’t get mental health care within the last 12 months, 2021



Source: Colorado Health Access Survey 2021, Colorado Health Institute

Figure 7: Mental Health Care Utilization, Arapahoe County and Colorado, 2021

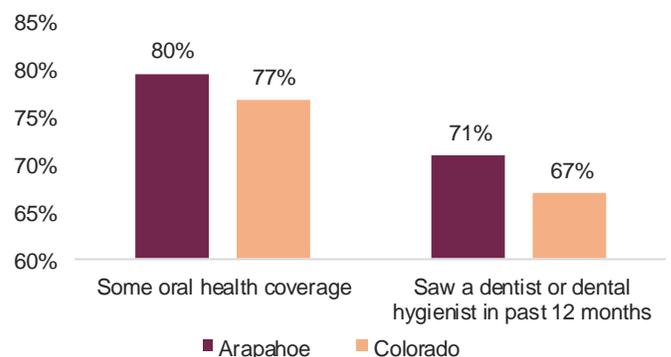


Source: Colorado Health Access Survey 2021, Colorado Health Institute

## Oral Health

Oral health is central to a person’s overall health and well-being, and includes the health of the teeth, the mouth, and surrounding craniofacial (skull and face) structures. Significant improvement of the oral health of Americans over the past 50 years is a public health success story, and most gains are a result of effective prevention and treatment efforts. People who have the least access to preventive services and dental treatment have the greatest rates of oral diseases, and many oral diseases have associations to a variety of chronic health conditions. A host of barriers that can limit a person’s use of preventative oral health care include limited access to and availability of services, lack of awareness of the need for care, cost, and fear of dental procedures. Figure 8 shows oral health care utilization among Arapahoe County residents as compared to Colorado.

Figure 8: Oral Health Care Utilization, Arapahoe County and Colorado, 2021



Source: Colorado Health Access Survey 2021, Colorado Health Institute



*A healthy community is where all people, regardless of their income, can access high quality health care.*

Arapahoe County

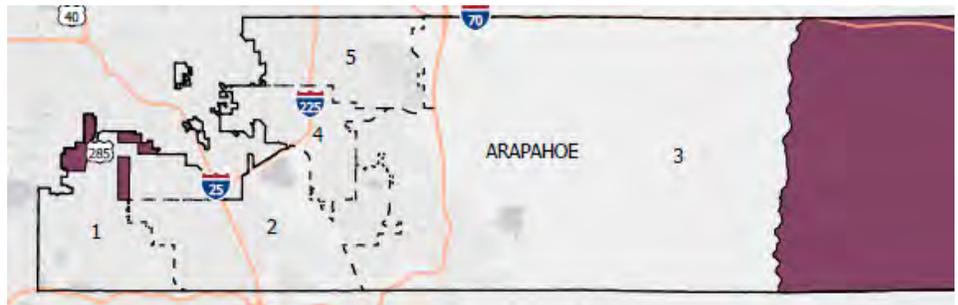
**Arapahoe County survey and focus group respondents noted that access to care is influenced by many factors, including insurance, cost, ability to navigate the health system, ability to be seen by a provider, the time it takes to get an appointment, and transportation to and from appointments and services.**

## Medically-Underserved Areas

Lack of available and affordable primary care can result in the health of people with treatable or preventable conditions worsening to the point of needing inpatient hospital care, which is more costly. Individuals may also be hospitalized if they are unable to afford necessary prescriptions or other forms of basic care. The federal Health Services and Resources Administration determines geographic areas of unmet need. These include Medically-Underserved Areas (MUAs) and Health Professional Shortage Areas (HPSAs).<sup>1</sup> Map 1 highlights the MUAs in Arapahoe County. MUAs and HPSAs are not automatically designated, but require local request for designation. Having a federal designation can increase access to certain federal resources and services.

Access to affordable, high quality mental and physical health care is necessary to prevent, manage, and treat health conditions. Preventive health care (such as immunizations and routine checks) provides protection to those at risk, treats people who may not have symptoms but have unhealthy conditions detected through screening (such as for high blood pressure), and promotes positive health behaviors (such as diet and exercise) to keep people from developing illness. Emergency medical services are also crucial in ensuring better outcomes for those who are injured or seriously ill. Many mental health disorders and substance use disorders can benefit from preventive care, treatment, and support services. Affordable services help ensure that all people in our communities have the mental and physical energy, vitality, and resilience to obtain optimal health.

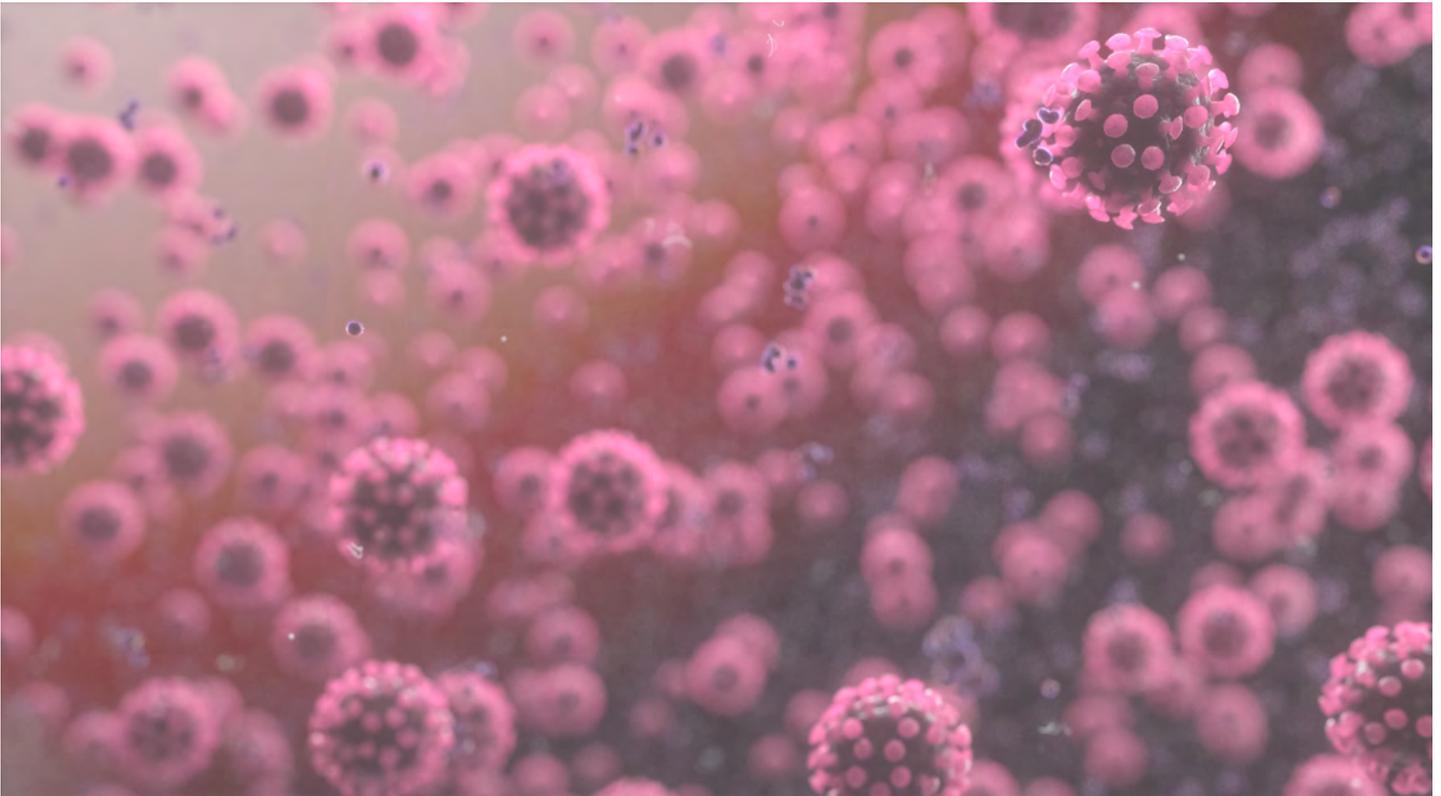
**Map 1: Medically-Underserved Areas (MUAs), 2020<sup>1</sup>**



<sup>1</sup> <https://bhwhrsa.gov/workforce-shortage-areas/shortage-designation>

## What Our Community Said

- Over one in ten (11.0%) of all comments from the community surveys and focus groups related to access to physical or mental health care services.
- Access to care was often mentioned by community members as a basic human need, along with shelter, food, and clothing.
- Respondents noted that access is influenced by many factors, including insurance, cost, ability to navigate the health system, ability to be seen by a provider, the time it takes to get an appointment, and transportation to and from appointments and services.
- In addition to accessible services, case management and care coordination were noted as important for effectively navigating services.



*Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\**

 Tri-County Health Department | 2022 Community Health Assessment  
Arapahoe County, Colorado

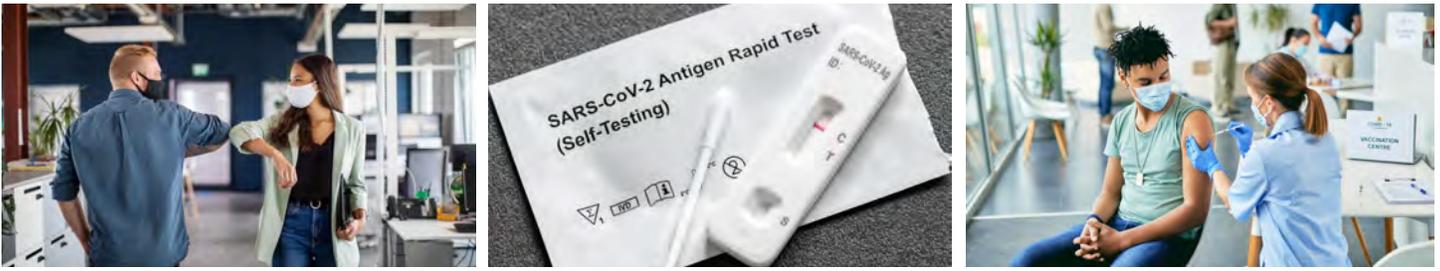
\*Vision Statement adapted from quotation by Ursula von de Leyen, President of the European Commission, [https://twitter.com/vonderleyen/status/1364245038570569736?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Cwterm%5E1364245038570569736%7Ctwgr%5E%7Cwcon%5Es1\\_&ref\\_url=https%3A%2F%2Fwww.globalcitizen.org%2Fen%2Fcontent%2Frecovery-plan-world-leaders-inspiring-quotes%2F](https://twitter.com/vonderleyen/status/1364245038570569736?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Cwterm%5E1364245038570569736%7Ctwgr%5E%7Cwcon%5Es1_&ref_url=https%3A%2F%2Fwww.globalcitizen.org%2Fen%2Fcontent%2Frecovery-plan-world-leaders-inspiring-quotes%2F)



# COVID-19

Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\*

Arapahoe County



## COVID-19 Summary Statistics, Arapahoe County, March 2020—December 2021

### Cases

Rates of COVID-19 infection were over four times higher for Hispanic/Latinx populations than rates among their White, Non-Hispanic, Black, and Asian neighbors.

### Hospitalizations

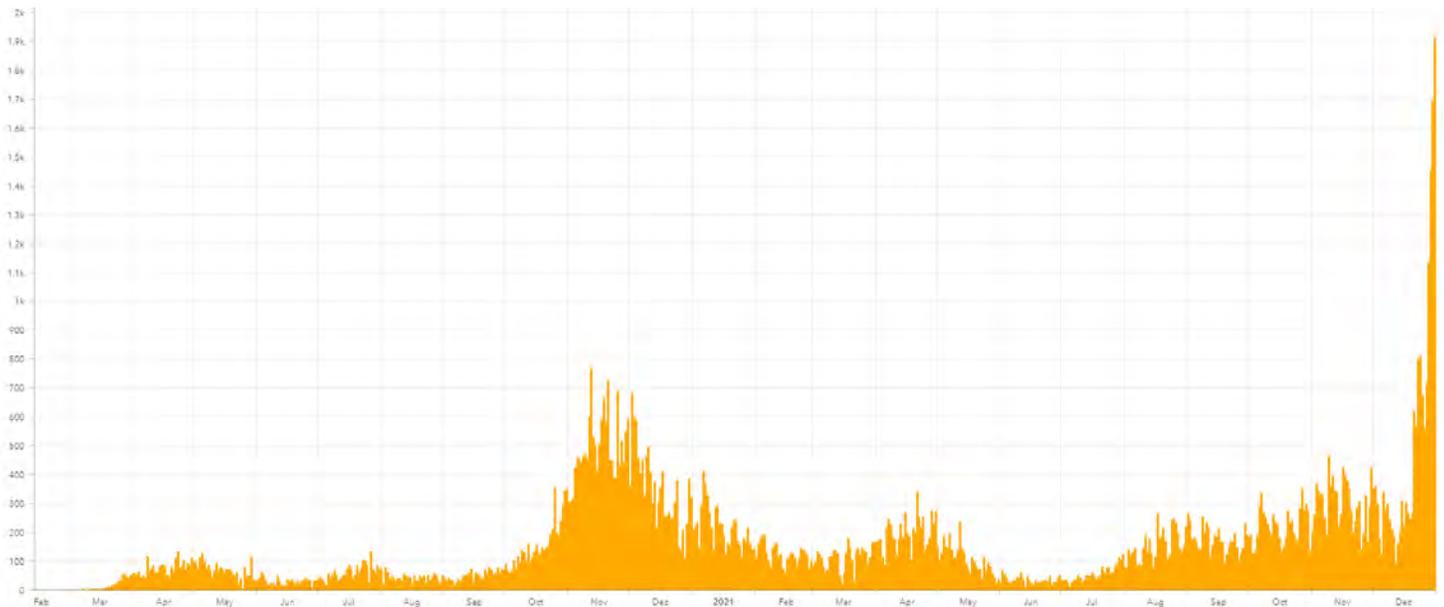
Rates of COVID-19 hospitalization were six times higher for those 75-years-old and older compared to those 18-44 years-old.

### Deaths

60% of all COVID-19 deaths were individuals 75-years-old and older.

The Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Common characteristics of COVID-19 disease include fever, cough, fatigue, shortness of breath, muscle aches, congestion, nausea or vomiting, diarrhea, and loss of taste and/or smell. The virus is transmitted through small, aerosolized droplets from an infected person's mouth. There are several prevention measures that can reduce risk of transmission including social distancing, mask wearing, hand washing, isolation and quarantine, and vaccination.<sup>1</sup>

Figure 1: COVID-19 Cases by Report Date, Arapahoe County, Colorado (2020-2021)



Source: Tri-County Health Department, Colorado Department of Public Health and Environment

<sup>1</sup> Centers for Disease Control and Prevention, <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

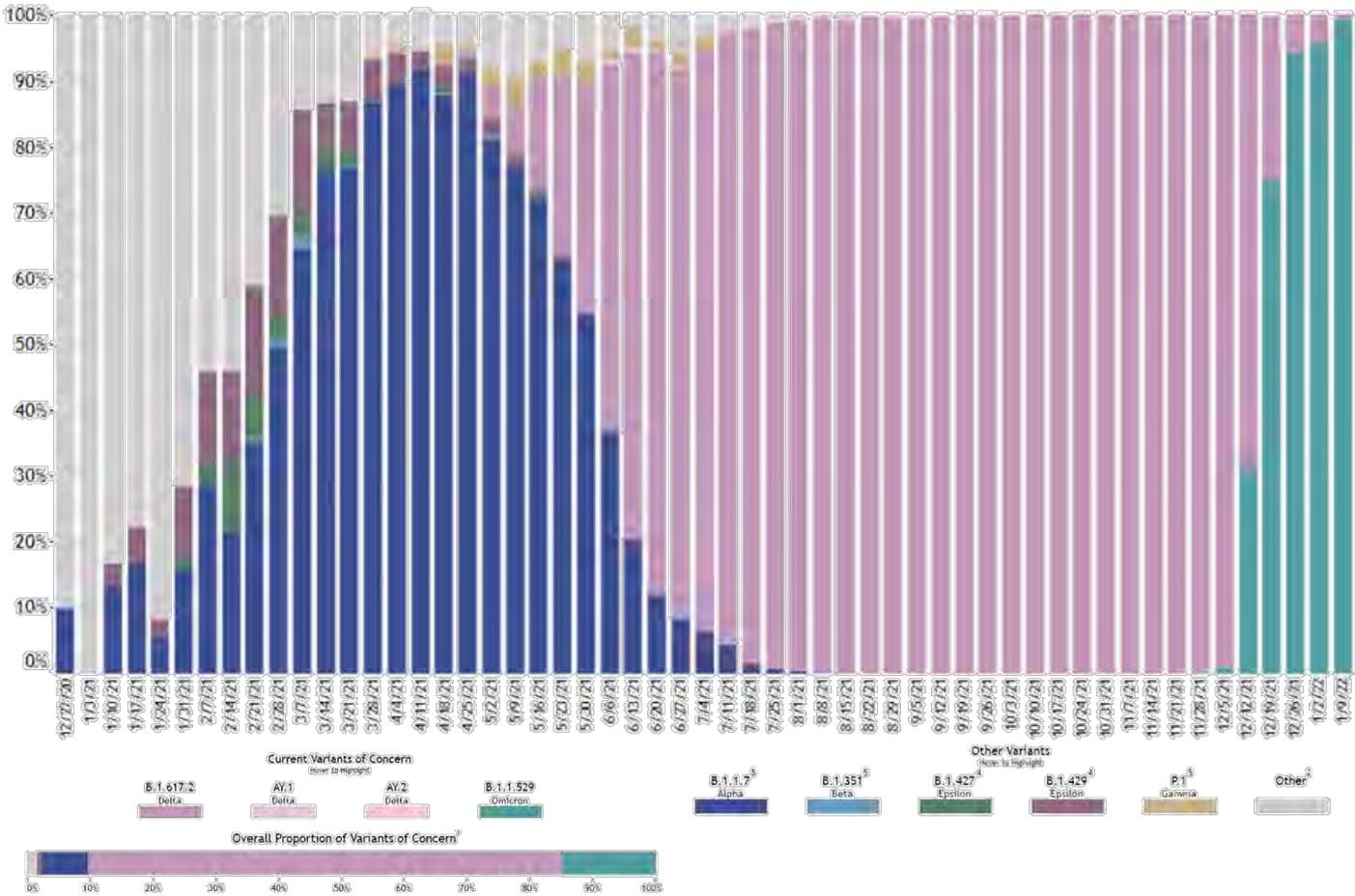


# COVID-19

Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\*

Arapahoe County

### Figure 2: Proportion of COVID-19 Variants of Concern by Specimen Collection Date Week, Colorado



Source: Colorado Department of Public Health and Environment

The SARS-CoV-2 virus, the virus that causes the COVID-19 disease, was first identified in Wuhan, China in December 2019. Over the next few months, SARS-CoV-2 quickly spread across the globe, and has been detected in over 200 countries.<sup>2</sup> The first case of COVID-19 in Arapahoe County was detected on March 2, 2020. After the initial wave in the early of 2020, global variants of concern have continued to cause waves of infections leading to spikes in case rates (Figure 1). Alpha was the dominant variant for the peak in early 2021, followed by Delta in Fall 2021, and Omicron which began in December 2021 (Figure 2). Omicron has been the most infectious variant to date, with peak seven-day infection rates two to three times higher than any other surge; however, cases from Omicron infection have had the lowest case-hospitalization rates (Figure 3).

<sup>2</sup> Johns Hopkins University, <https://coronavirus.jhu.edu/data/mortality>

### Figure 3: Percent of Cases that became hospitalized in Arapahoe County by Age Group, June 2020-December 2021



Source: Colorado Department of Public Health and Environment, Tri-County Health Department



# COVID-19

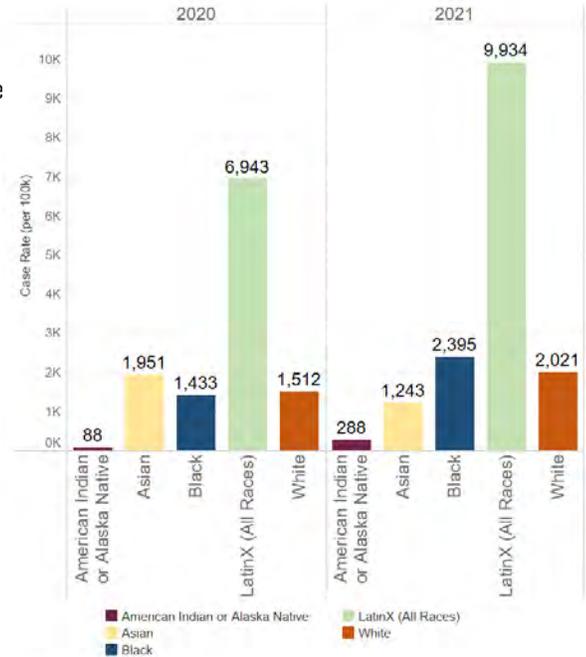
Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\*

## Arapahoe County

### Race and Ethnicity

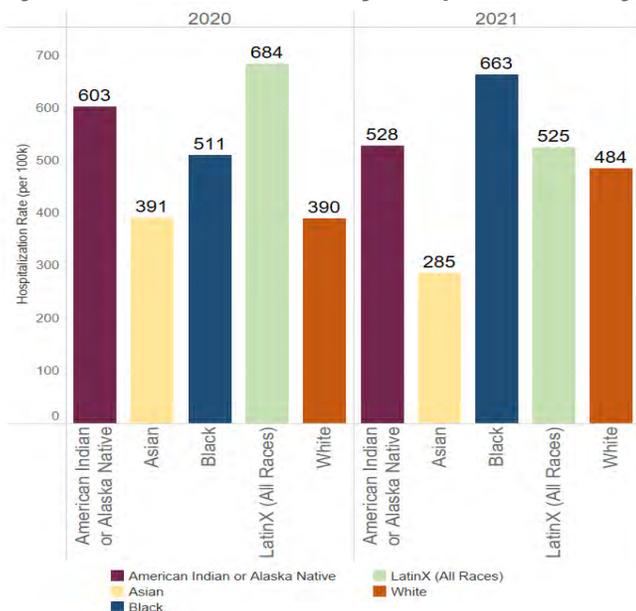
COVID-19 has impacted the lives of everyone in Arapahoe County, but some communities have been disproportionately more affected. Social determinants of health contribute to risk of COVID-19 infection and morbidity (illness) as well as severity (hospitalization) and mortality (death); these determinants include occupation, neighborhood and physical environment, access to testing, vaccine access and uptake, and discrimination within the health care system.<sup>3</sup> These factors not only impact exposure to the virus, but trust in the health care and public health systems, and access to and utility of services. People of color are overrepresented in essential industries, such as meat processing facilities, which are often overcrowded.<sup>4</sup> A study of workplace-related outbreaks found that the industries with the most outbreaks in Utah were manufacturing, construction, and wholesale trade, which were disproportionately Hispanic/Latinx and/or non-White. In addition, compared to White, non-Hispanic people, people from racial and ethnic minorities were more likely to experience crowded living conditions, which pose challenges for reducing transmission through isolation and quarantine.<sup>5</sup> These differences in living and working conditions have resulted in increased risk of COVID-19 exposure. In 2020 in Arapahoe County, compared to White, non-Hispanic residents, Hispanic/Latinx residents were 4.7 times more likely to become infected with COVID-19 and 1.8 times more likely to be hospitalized (Figures 4, 5). The mortality rate for White, non-Hispanic residents was higher than for other race/ethnicities, but a larger portion of cases among White people were over the age of 65.

Figure 4: COVID-19 Incidence Rate (per 100k), by Year and Race/Ethnicity, Arapahoe County



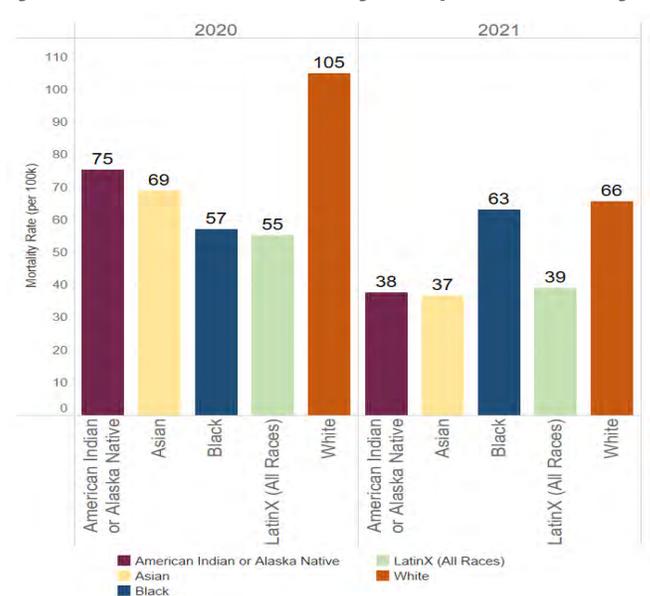
Source: Colorado Department of Public Health and Environment (CDPHE), Tri-County Health Department

Figure 5: COVID-19 Hospitalization Rate (per 100k), by Year and Race/Ethnicity, Arapahoe County



Source: CDPHE, Tri-County Health Department

Figure 6: COVID-19 Mortality Rate (per 100k), by Year and Race/Ethnicity, Arapahoe County



Source: CDPHE, Tri-County Health Department

<sup>3</sup> Centers for Disease Control and Prevention, <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/increased-risk-exposure.html#ref19>

<sup>4</sup> Differential occupational risk for COVID-19 and other infection exposure according to race and ethnicity: <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23145>

<sup>5</sup> U.S. Census Bureau, [https://www.census.gov/content/dam/Census/programs-surveys/ahs/publications/Measuring\\_Overcrowding\\_in\\_Hsg.pdf](https://www.census.gov/content/dam/Census/programs-surveys/ahs/publications/Measuring_Overcrowding_in_Hsg.pdf)

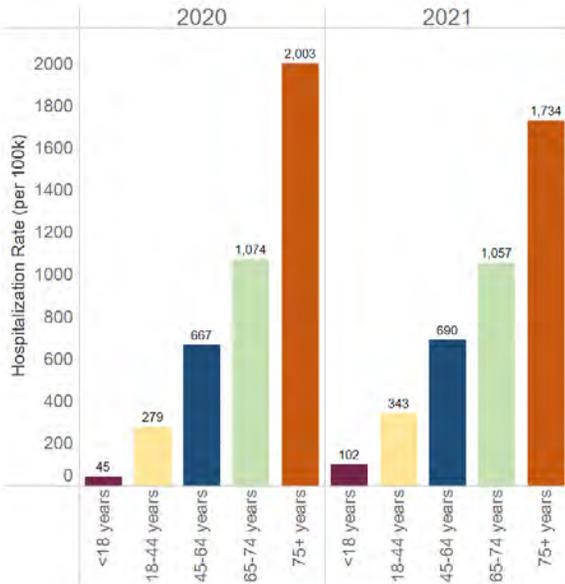


# COVID-19

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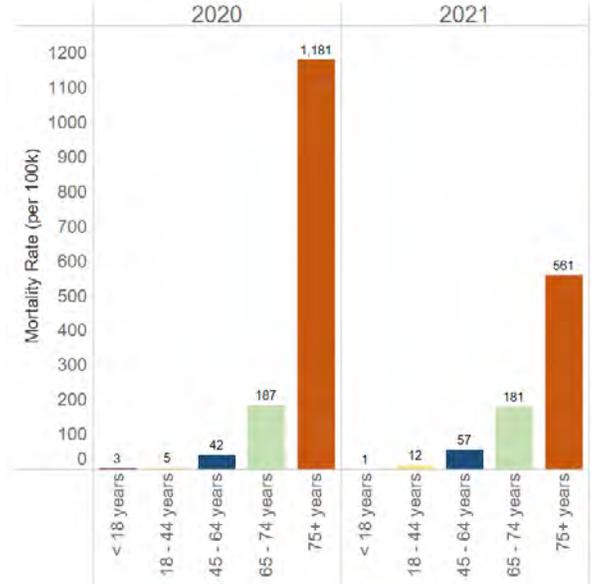
Arapahoe County

Figure 7: COVID-19 Hospitalization Rate (per 100k), by Year and Age, Arapahoe County



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

Figure 8: COVID-19 Mortality Rate (per 100k), by Year and Age, Arapahoe County



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

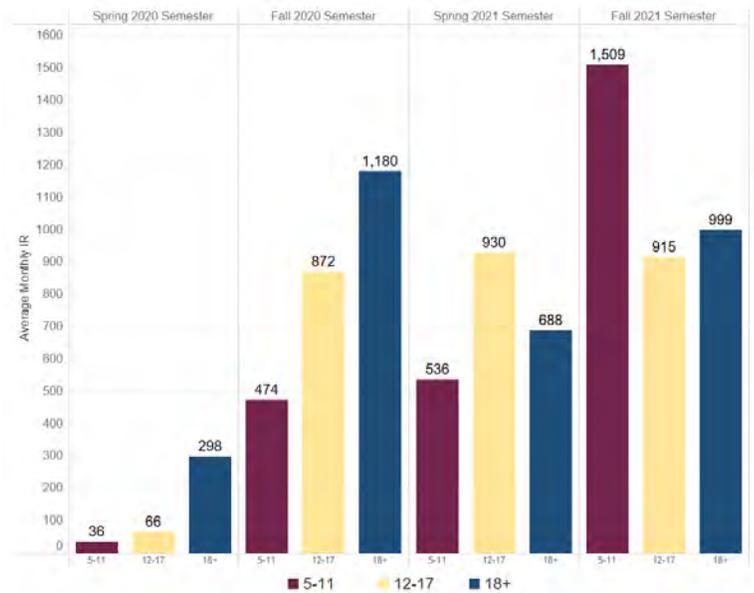
## Older Adults

In Arapahoe County, COVID-19 infection rates, illness severity, and mortality varied by age throughout the pandemic. Due to a less robust immune system, and increased likelihood of under-lying disease, older individuals are at increased risk of hospitalization and death due to COVID-19.<sup>6</sup> In Arapahoe County in 2020, those aged 75 years and older experienced hospitalization rates two times higher than the next closest age group, 65-74, and mortality rates six times greater than those aged 65-74 years (Figures 7,8).

## Youth

Infection rates among youth in Arapahoe County have varied throughout the pandemic due, in part, to school district policies as well as vaccine availability and eligibility. During the 2020 spring and fall semesters, a majority of school districts in Arapahoe County participated in remote learning; during that time, adults had higher infection rates (Figure 9). Once in-person learning recommenced in the 2021 spring semester, infection rates among youth aged 12-17 surpassed the adult rate. By fall 2021, 12-17 year-olds were eligible for vaccines and infection rates among that age group were slightly lower than the adult rate; however, during that time, the rate for 5-11 year-olds—those who were not yet eligible for vaccines and remained unvaccinated—surpassed the other groups.

Figure 9: COVID-19 Incidence Rate (per 100k), by School Semester and Age Group, Arapahoe County



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

<sup>6</sup> Centers for Disease Control; <https://www.cdc.gov/aging/covid19/covid19-older-adults.html>



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## Testing

Universal community access to COVID-19 testing has been an important public health focus throughout the pandemic. Testing allows individuals to make decisions around medical treatment, travel, and isolation and quarantine decisions. There are several barriers to access to testing including insurance and employment status, geographic barriers such as distance to testing sites, and the ability to take time off work. Many of the free testing sites experienced large wait times when rates were high, whereas it was more accessible for the insured to make an affordable testing appointment with their provider.

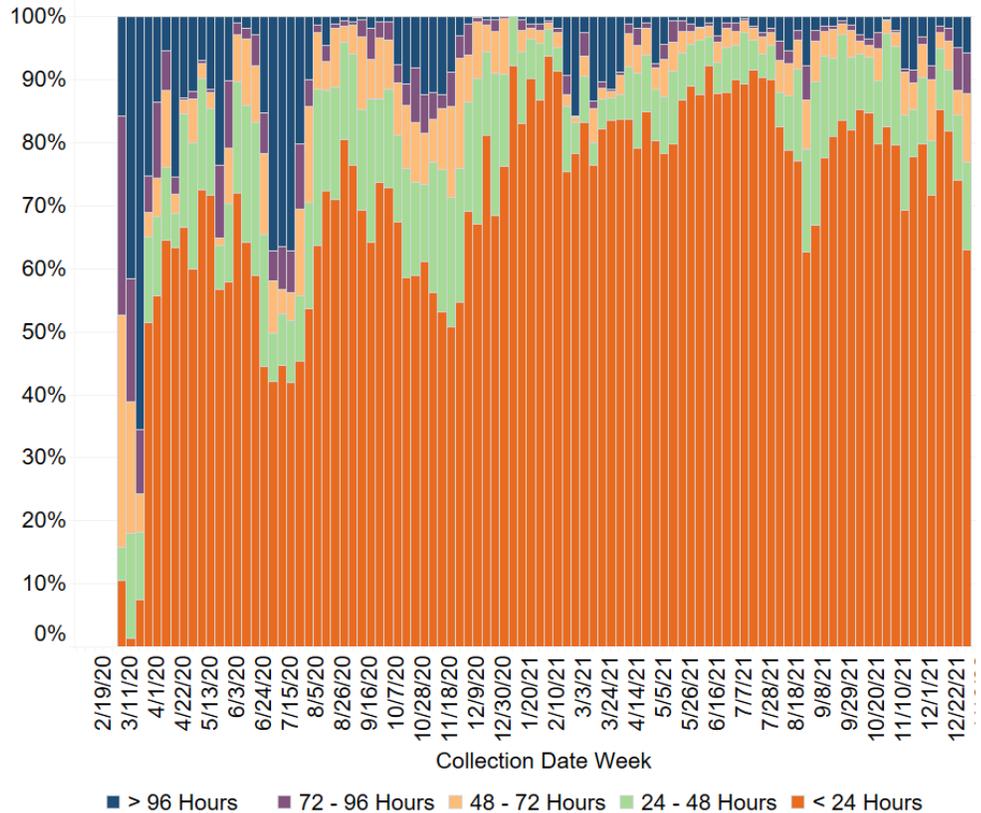
## Test Turnaround Time

Test turnaround time, the difference in time between specimen collection and test result availability, is another factor that affects an individual's ability to quickly isolate and/or quarantine. There were several periods throughout the pandemic where the testing delay was four or more days (Figure 10).

## Percent Positivity

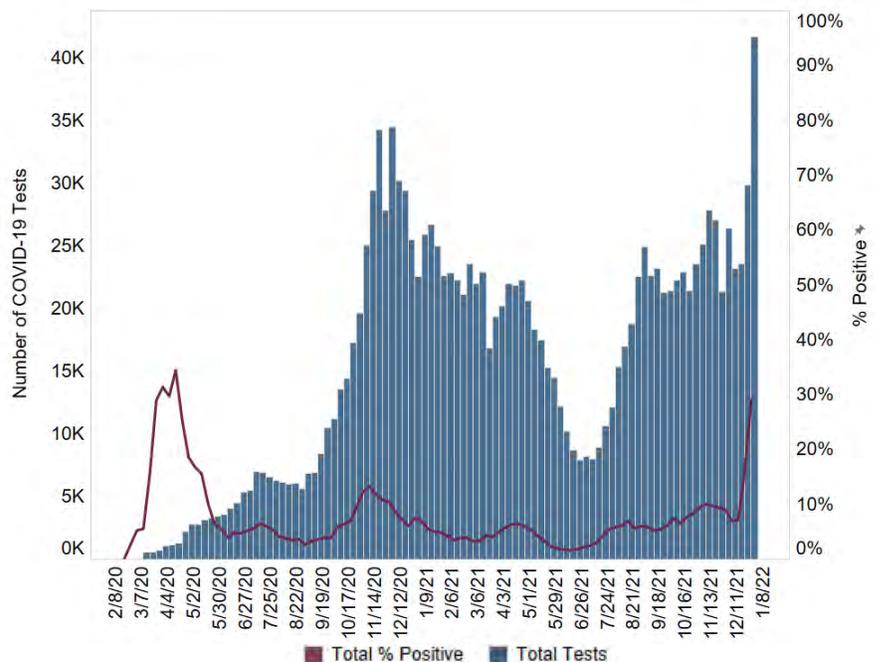
The percent of SARS-CoV-2 tests that are positive (percent positivity) informs local public health professionals about the transmission level in the community, and whether enough testing is being performed to detect those who are infected.<sup>9</sup> Figure 11 displays test positivity throughout the pandemic. We can see that high positivity rates were correlated with periods of higher incidence rates.

Figure 10: Test Turnaround Time- Percent of test results coming back within specified time frame, by testing week, Arapahoe County



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

Figure 11: Number of tests, percent positivity by testing week, Arapahoe County



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

<sup>8</sup> Science Direct; <https://www.sciencedirect.com/science/article/pii/S1047279721000533>

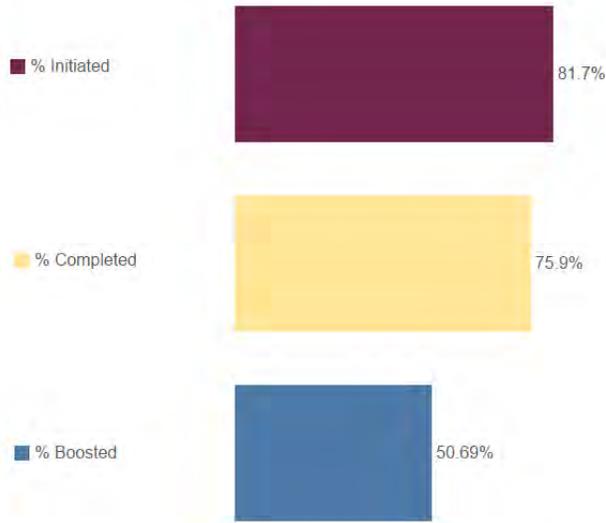
<sup>9</sup> Johns Hopkins University; <https://publichealth.jhu.edu/2020/covid-19-testing-understanding-the-percent-positive>



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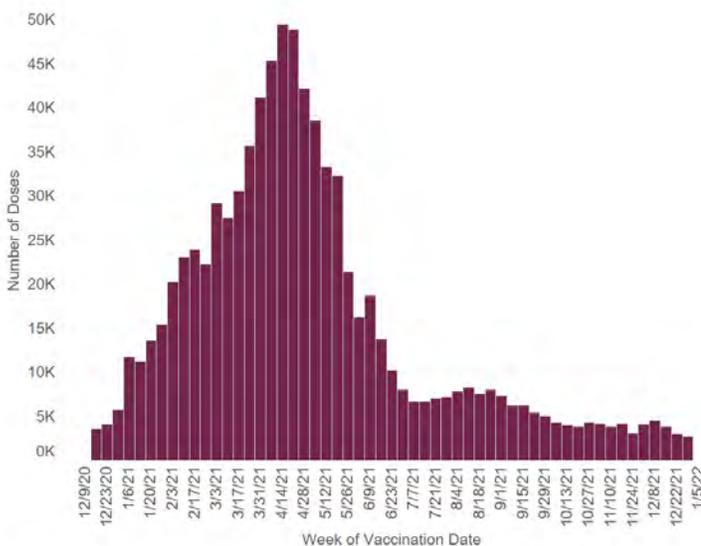
## Arapahoe County

**Figure 13: Percent of Individuals with Initiated, Completed, or Boosted COVID-19 Vaccine Regimens, Arapahoe County (Data through 12/31/2021)**



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

**Figure 14: COVID-19 Vaccine Doses Administered by Week, Arapahoe County (Data through 12/31/21)**



Source: Colorado Department of Public Health and Environment, Tri-County Health Department

## Vaccines

Vaccinations are essential for reducing COVID-19 transmission and disease burden.<sup>10</sup> In the United States, there are three main COVID-19 vaccines available: Moderna and Pfizer, which use mRNA technology that was not FDA-approved prior to the pandemic, and Johnson and Johnson—a vector-based vaccine. For most people aged five years and older, an initial completed series of a COVID-19 vaccination consists of two doses of mRNA vaccines or one dose of Johnson and Johnson. Any additional dose beyond the initial completed series is considered a booster dose with the exception of immunocompromised people for whom the initial mRNA series includes a third dose and the fourth jab is considered the booster shot.

The Pfizer COVID-19 vaccine was first approved by the federal Food and Drug Administration (FDA) for emergency use authorization (EUA) December 11th, 2020.<sup>11</sup> Over the next few months, a risk-based, tiered vaccine eligibility schedule was rolled out with higher-risk-for-infection groups, such as the elderly, immunocompromised and frontline workers, eligible to receive the vaccine first. In April, 2021, thirteen months after the first case was detected in Arapahoe County, vaccines became available to all adults. Children aged five to eleven years were the last group to become approved, seven months later, in October 2021. There is currently no vaccine authorized for children under the age of five. Additional booster doses were approved for all adults in November, 2021, after research and surveillance indicated that protection from the initial completed series wanes after several months.<sup>11</sup> As of 12/31/2021, 81.7% of individuals in Arapahoe County had received at least one COVID-19 vaccine dose, 75% had completed their initial vaccine series (two doses of Moderna and/or Pfizer or one dose of Johnson & Johnson), and 51% had received an additional booster dose (any vaccine dose beyond the initial completed series) (Figure 13).

## Vaccine Hesitancy

While vaccine availability impacted population-vaccination rates early in the pandemic, vaccine hesitancy continues to influence Arapahoe County residents. A systematic review of vaccine studies

\*This reflects the percentage of individuals 18+ who have received an additional vaccine dose after completing their initial vaccination series, regardless of their eligibility for a booster. Individuals 18+ are eligible for a booster 6 months after completing their RNA vaccination series, or 2 months after receiving a Johnson & Johnson vaccine. The percentage is calculated based on the number of individuals who are eligible for a booster. Other percentages are based on the most population estimates from the Colorado State Demography office.

<sup>10</sup>COVID-19 Vaccine Hesitancy in the United States: A Systematic Review; <https://pubmed.ncbi.nlm.nih.gov/34888288/>

<sup>11</sup> <https://www.hhs.gov/coronavirus/covid-19-vaccines/index.html>





Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\*

Arapahoe County

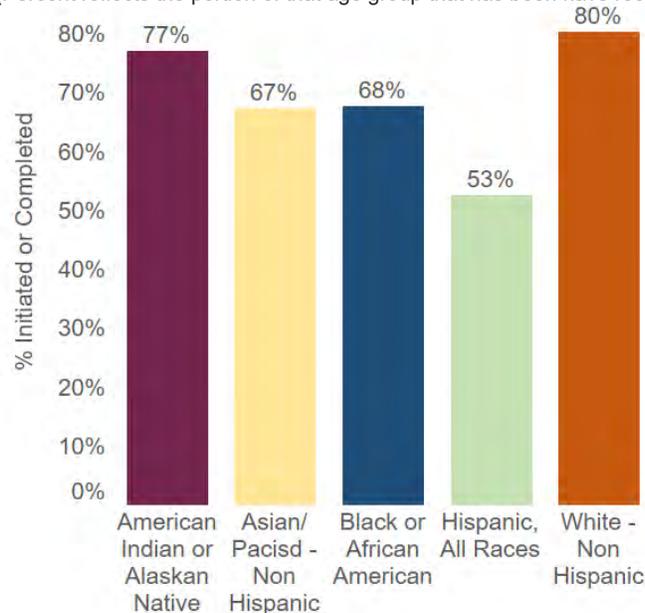
## Restoring trust in medical professionals and vaccines requires a strategic approach to overcome the racial injustice in the system, while timely implementation of vaccine delivery plans remains a challenge as new strains of coronavirus emerge as potential threats to the healthcare system.

conducted through July 2021 revealed that—even before vaccine availability—vaccine hesitancy, particularly due to a lack of understanding of the COVID-19 vaccine development process—impacted vaccine uptake. The review found that in 2020 hesitancy was highest among Black/African American respondents, followed by Hispanic/Latinx individuals. Other research on vaccine acceptance among various sexual and gender minority groups found that the largest discrepancies in vaccine acceptance occurred among Black/African American individuals.<sup>12</sup> Minority groups, especially Black/African Americans, have experienced a “deep-seated mistrust in the healthcare system.”<sup>13</sup> These sources of mistrust are rooted in historical racism, trauma, and unethical practices such as the Tuskegee Syphilis study, which studied the course of Syphilis disease in Black/African Americans without their knowledge or consent.<sup>14</sup> Current immigration policies and practices also foster mistrust of government among some Hispanic/Latinx communities.<sup>15</sup> Many current systems, policies, and practices feed mistrust of minority populations in government agencies and actions, such as the underrepresentation of minority groups in COVID-19 vaccine clinical trials and immigration practices. In addition to mistrust and lack of information, research and experience suggest that differences in vaccine uptake among racial/ethnic groups is not due to vaccine hesitancy alone, but that other factors, including belief in safety and efficacy of the vaccine, influence people’s decision to get vaccinated.<sup>14</sup>

Looking at the percent of the population who has received at least one dose by race and ethnicity in Arapahoe County, the rates for Hispanic/Latinx individuals were 27% lower than White, Non-Hispanic/Latinx individuals. Black/African Americans had rates 12% lower and Asians and Pacific Islanders were 13% lower (Figure 15) than White, Non-Hispanic individuals.

**Figure 15: Percent of Individuals Vaccinated in Arapahoe County by Race/Ethnicity through 12/31/2021**

(Percent reflects the portion of that age group that has been have received at least one dose.)



<sup>12</sup> COVID-19 Vaccine Acceptance among an Online Sample of Sexual and Gender Minority Men and Transgender Women <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7999863/>

<sup>13</sup> COVID-19 Vaccine Hesitancy in the United States: A Systematic Review; <https://pubmed.ncbi.nlm.nih.gov/34888288/>

<sup>14</sup> Changes in COVID-19 Vaccine Hesitancy Among Black and White Individuals in the US <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2788286>

<sup>15</sup> Confidence and Hesitancy During the Early Roll-out of COVID-19 Vaccines Among Black, Hispanic, and Undocumented Immigrant Communities: a Review, <https://doi.org/10.1007/s11524-021-00588-1>

Source: Colorado Department of Public Health and Environment, Tri-County Health Department





# COVID-19: Appendix

*Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\**

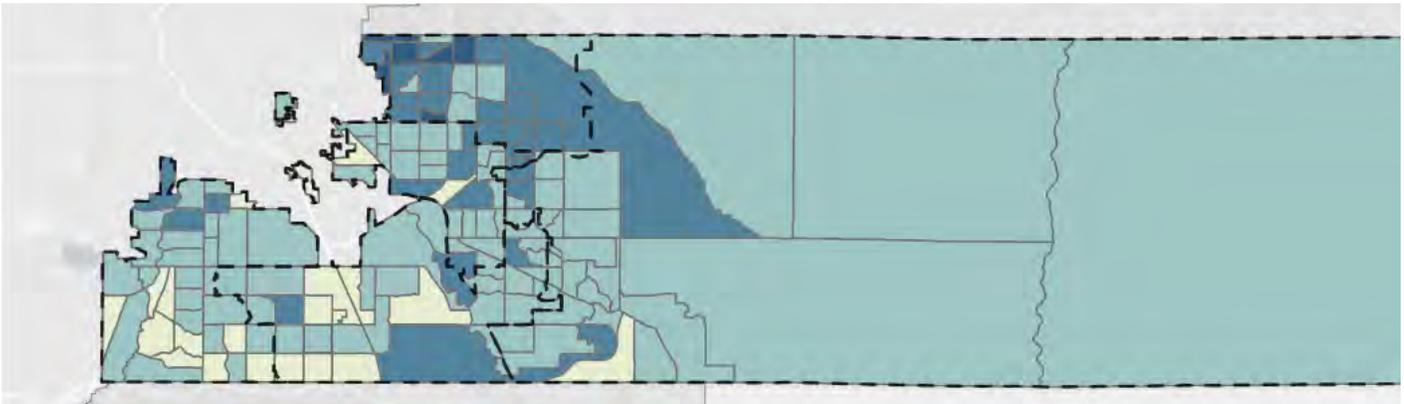
**Arapahoe County**

## Appendix

The following set of maps and tables highlight annual (2020 and 2021) data of interest. Data are visualized by census tract; darker colors indicate higher rates of infection, hospitalization, mortality, or vaccination. Similar colors do not indicate the same scale; look to each figure's legend for its individual scale. The dotted lines indicate Arapahoe County's County Commissioner district boundaries. Note that comparisons between 2020 and 2021 are limited as 2020 does not include a complete year of data.

### Infection Rates

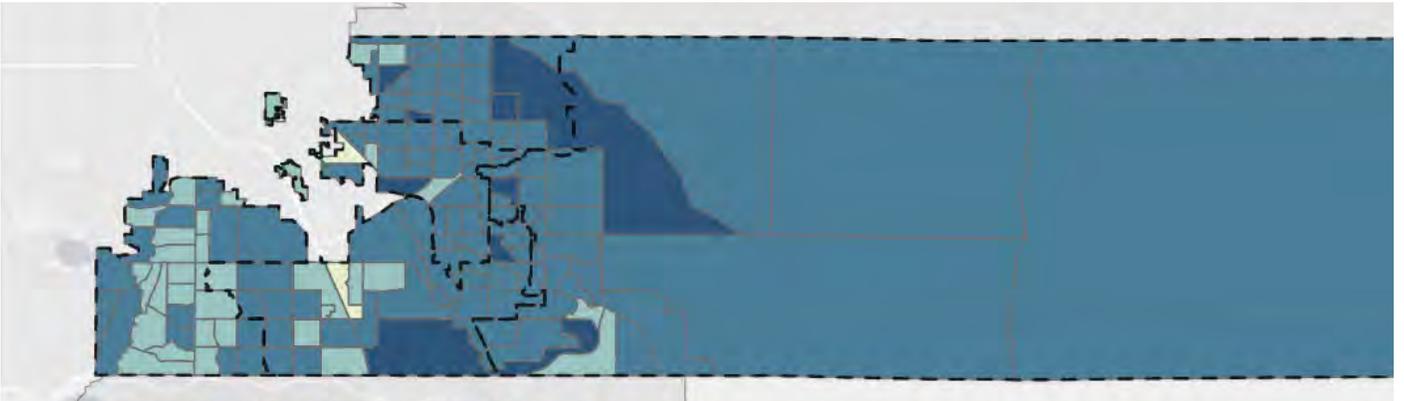
**Map 1: 2020 Annual COVID-19 Infection Rates (per 100,000) by Census Tract, Arapahoe County**



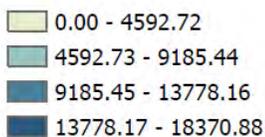
Arapahoe Case Rates (2020)



**Map 2: 2021 Annual COVID-19 Infection Rates (per 100,000) by Census Tract, Arapahoe County**



Arapahoe Case Rates (2021)



Source: Tri-County Health Department, Colorado Department of Public Health and Environment



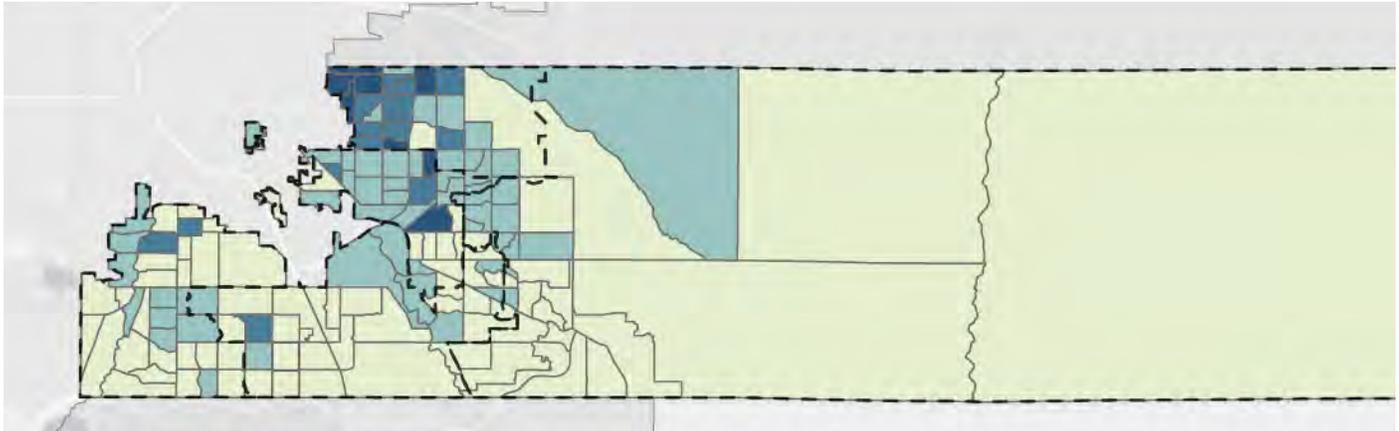
# COVID-19: Appendix

*Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\**

Arapahoe County

## Hospitalization Rates

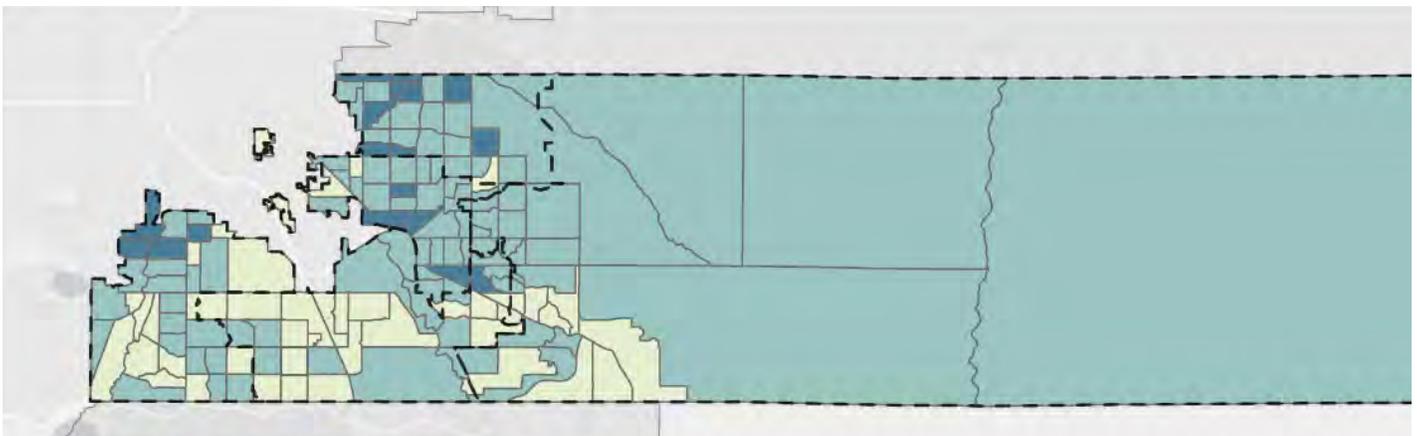
Map 3: 2020 Annual COVID-19 Hospitalization Rates (per 100,000) by Census Tract, Arapahoe County



Arapahoe Hospital Rates  
(2020)

- 51.52 - 408.70
- 408.71 - 765.89
- 765.90 - 1123.08
- 1123.09 - 1480.26

Map 4: 2021 Annual COVID-19 Hospitalization Rates (per 100,000) by Census Tract, Arapahoe County



Arapahoe Hospital Rates  
(2021)

- 0.00 - 403.71
- 403.72 - 807.41
- 807.42 - 1211.12
- 1211.13 - 1614.83

Source: Tri-County Health Department, Colorado Department of Public Health and Environment



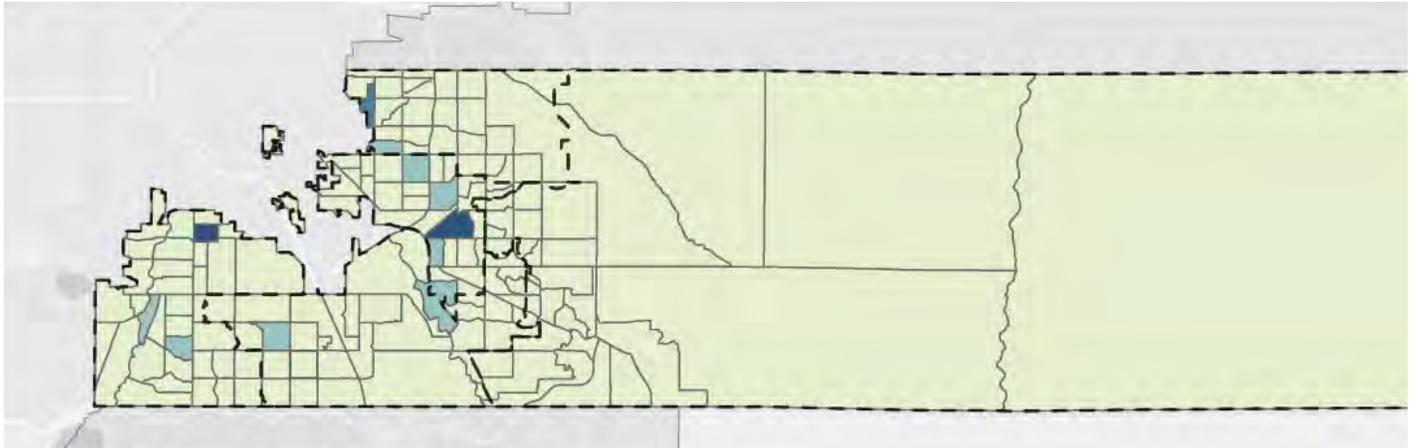
# COVID-19: Appendix

*Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\**

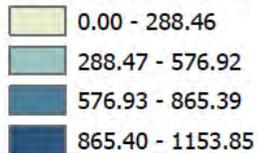
**Arapahoe County**

## Mortality Rates

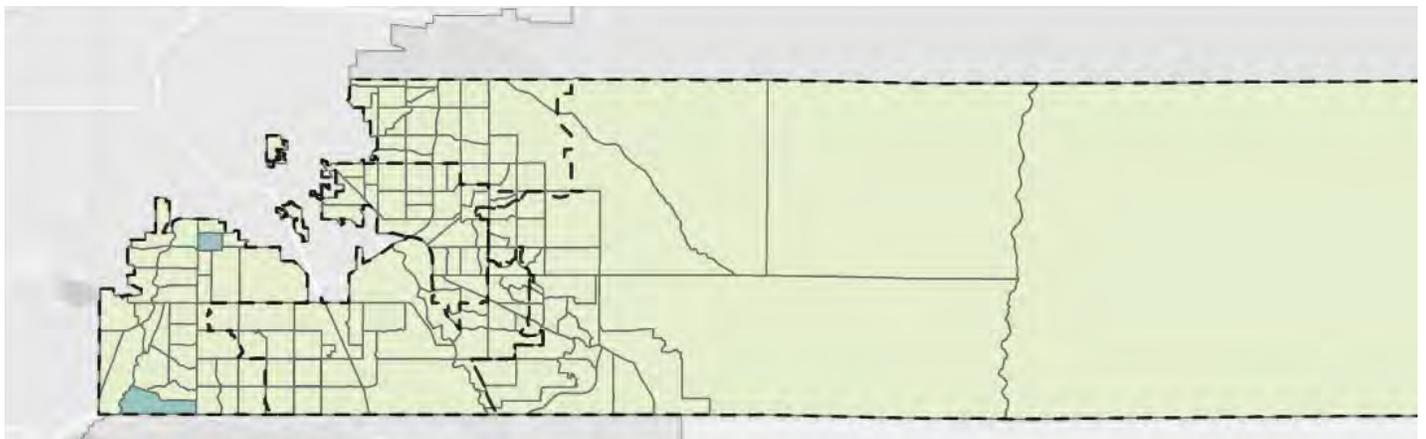
**Map 5: 2020 Annual COVID-19 Mortality Rates (per 100,000) by Census Tract, Arapahoe County**



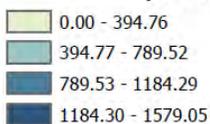
**Arapahoe Death Rates (2020)**



**Map 6: 2021 Annual COVID-19 Mortality Rates (per 100,000) by Census Tract, Arapahoe County**



**Arapahoe Death Rates (2021)**



Source: Tri-County Health Department, Colorado Department of Public Health and Environment





Together, we'll overcome the COVID-19 pandemic, prepare to face those of the future, reduce the impact on the vulnerable, and address root causes of disparate impact.\*

Arapahoe County

## Vaccination Rates and Vaccine Data

**Figure 16: Individuals Vaccinated, by Age Group, Arapahoe County (Data as of 12/31/21)**

Percent reflects the portion of that age group that has been vaccinated.

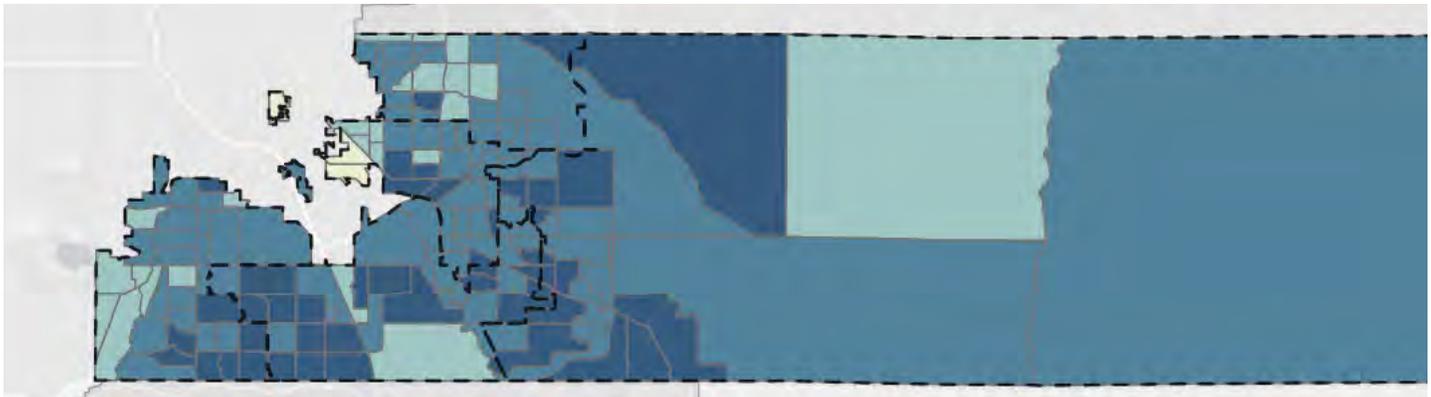
Age Group	% Initiated or Completed	% Completed	% Boosted* (eligible population)
5-11	45%	35%	
12-15	73%	67%	20%
16-17	77%	70%	33%
18-29	78%	68%	33%
30-39	87%	79%	43%
40-49	97%	90%	49%
50-59	82%	77%	56%
60-69	86%	81%	69%
70+	97%	92%	76%

**Figure 17: Percent of Individuals Vaccinated, by Race/Ethnicity, Arapahoe County (Data as of 12/31/21)**

Percent reflects the portion of that age group that has been vaccinated.

	% Initiated or Completed	% Completed	% Boosted* (of eligible population)
American Indian or Alaskan Native	77%	67%	34%
Asian/Pacific Islander - Non Hispanic	67%	62%	59%
Black or African American	68%	61%	42%
Hispanic, All Races	53%	47%	39%
White - Non Hispanic	80%	75%	56%

**Map 7: 2021 COVID-19 Percent Vaccinated by Census Tract, Arapahoe County**



Arapahoe Vaccination Rates (2020-2021)

- 15.26 - 32.76
- 32.77 - 50.26
- 50.27 - 67.76
- 67.77 - 85.26

\*This reflects the percentage of individuals 18+ who have received an additional vaccine dose after completing their initial vaccination series, regardless of their eligibility for a booster. Individuals 18+ are eligible for a booster 6 months after completing their RNA vaccination series, or 2 months after Johnson & Johnson. The percentage is calculated based on the number of individuals who are eligible for a booster. Other percentages are based on the most population estimates from the Colorado State Demography office.

Source: Tri-County Health Department, Colorado Department of Public Health and Environment

# Asset Inventory



# Asset Inventory

Tri-County Health Department | Community Health Assessment 2022

An asset is a useful or valuable thing, person, or quality. Assets improve quality of life. Individuals, communities, and institutions all have assets that contribute to quality of life. In keeping with the feedback we received from community members, partners, and TCHD staff regarding the components of a healthy community, these assets are similarly organized. This is not an exhaustive list, but provides a starting point for understanding the strengths of our communities.

## Social Connections

- Arts organizations
- Boys and Girls Clubs
- Citizen's Advisory Boards
- Community gardens
- Community markets
- Community newsletters/newspapers
- Community parks and public spaces
- Counseling and support programs
- County fair grounds
- Family Resource Centers
- Girls on the Run and other after school clubs
- GLBT Community Center of Colorado
- Indoor/outdoor malls and public spaces
- Leadership groups
- Libraries
- Local "Meet up" events (literal website or things like the "Denver Cruisers" and running clubs)
- Local community events and festivals
- Neighbors and Next Door
- Places of worship—synagogues, mosques, churches
- Recreation centers, including yoga

- and meditation centers
- School playgrounds
- Social & Resource Centers (community, seniors, veterans, etc.)
- Service Clubs (i.e., Elks, Rotary, Lions, Optimists, Kiwanis, Sertoma)
- Sporting events, youth sport organizations
- Theaters, restaurants, entertainment venues
- Toast Masters
- Town hall meetings
- Volunteer Organizations in Disaster

## Opportunities

### Economic Resources

- AmeriCorps/VISTA/Service Corp programs
- Chambers of Commerce
- City Governments
- County Human Services
- Economic development organizations
- Faith-based organizations
- Legal Assistance
- Low-income Energy Assistance

- Program (LEAP)
- Major employers
- Small businesses
- Workforce development centers

### Educational Resources

- Adult education classes
- CERT Programs
- Colleges and Universities
- Colorado Child Care Assistance Program (CCAP)
- Community Colleges
- Community-centered boards
- Early Childhood Councils
- English as a second language classes
- Graduate Equivalency Diploma programs

- Head Start
- Libraries
- Primary and secondary schools
- Vocational and trade schools

## Health and Wellness Services

- 12-Step Organizations (AA, NA, etc.)
- Colorado Access
- Colorado Crisis Services
- Colorado Quit Line
- Community Health Centers
- Community Mental Health Centers
- Community Recreation Centers
- Community-based safety-net clinics
- Counselors and therapists
- Dialysis Centers
- Domestic violence organizations and shelters
- Health Clubs
- Hospitals
- Kids In Need of Dentistry (KIND)
- Local health alliances
- Parks and hiking trails

- Private health care providers
- Regional Accountable Entities (RAEs)
- School-based health centers
- Senior Resources Centers
- Tri-County Health Department
- YMCAs

## Neighborhood Conditions

- 211
- City Planning Departments
- Community gardens
- Community recreation centers
- Community-based organizations
- Denver Regional Council of Governments (DrCOG)
- Emergency housing organizations
- Food banks and food pantries
- Habitat for Humanity
- Housing Authorities (subsidized housing)
- Local businesses
- Local non-profit organizations
- Meals on Wheels/Congregate Meals Program
- OneHome
- Parks and Recreations Departments, open spaces and trails
- Regional Transportation District (RTD)
- Resettlement agencies and refugee/immigrant-serving organizations
- Ride Together, ALIFT
- Schools and universities
- Severe weather shelter networks
- Theaters, restaurants, entertainment venues
- Walking and biking groups

## Safety

- 911
- Colorado State Patrol
- County Sheriff's Departments
- Emergency Management
- Fire Rescue Services
- Health Department Emergency Preparedness and Response
- Local Police Departments
- Medical Reserve Corps
- Neighborhood Watch Programs
- Neighbors
- School Resource Officers (SROs)
- Victims Assistance Programs



## Additional Indicators

Leading cause of death by age  
Leading cause of death by race  
Years of potential life lost (YPLL)  
Life expectancy  
Select death trends  
Infant mortality by race  
Communicable disease rates  
Foodborne illness rates  
Immunization rates

# Appendix

Tri-County Health Department | Community Health Assessment 2022

Arapahoe County, Colorado

**Table 1: Leading causes of death by age group, Arapahoe County, 2011-2020**

Rank	All Ages	1 to 14 Years	15 to 24 Years	25 to 44 Years	45 to 64 Years	65+ Years
1	Malignant neoplasms	Unintentional injuries	Unintentional injuries	Unintentional injuries	Malignant neoplasms	Malignant neoplasms
2	Heart disease	Malignant neoplasms	Suicide	Suicide	Heart disease	Heart disease
3	Unintentional injuries	Suicide	Assault	Malignant neoplasms	Unintentional injuries	Alzheimer's disease
4	Chronic lower respiratory diseases	Congenital malformations and chromosomal abnormalities	Malignant neoplasms	Heart disease	Chronic liver disease and cirrhosis	Chronic lower respiratory diseases
5	Alzheimer's disease	Heart disease	Heart disease	Chronic liver disease and cirrhosis	Suicide	Cerebrovascular diseases
6	Cerebrovascular diseases	Assault	Diabetes mellitus	Assault	Diabetes mellitus	Diabetes mellitus
7	Suicide	Chronic lower respiratory diseases	Congenital malformations, deformations, and chromosomal abnormal	Diabetes mellitus	Chronic lower respiratory diseases	Parkinson's disease
8	Diabetes mellitus	Cerebrovascular diseases	In situ neoplasms, benign neoplasms, and neoplasms of uncertain or unknown behavior	Cerebrovascular diseases	Cerebrovascular diseases	Nephritis, nephrotic syndrome and nephrosis
9	Chronic liver disease and cirrhosis	Influenza and pneumonia	Influenza and pneumonia	Influenza and pneumonia	Influenza and pneumonia	Influenza and pneumonia
10	Influenza and pneumonia	In situ neoplasms, benign neoplasms	Chronic lower respiratory diseases	Chronic lower respiratory diseases	Nephritis, nephrotic syndrome and nephrosis	COVID-19

Source: Vital Records Program, Colorado Department of Public Health and Environment

# Appendix

Tri-County Health Department | Community Health Assessment 2022

Arapahoe County, Colorado

**Table 2: Leading causes of death by race/ethnicity, Arapahoe County, 2011-2020**

Rank	All Races	White, Non-Hispanic	Black, Non-Hispanic	Asian/Pacific Islander	American Indian/Alaska Native	Hispanic
1	Malignant neoplasms	Malignant neoplasms	Heart disease	Malignant neoplasms	Malignant neoplasms	Malignant neoplasms
2	Heart disease	Heart disease	Malignant neoplasms	Heart disease	Heart disease	Heart disease
3	Unintentional injuries	Unintentional injuries	Cerebrovascular diseases	Cerebrovascular diseases	Unintentional injuries	Unintentional injuries
4	Chronic lower respiratory diseases	Chronic lower respiratory disease	Unintentional injuries	Unintentional injuries	Chronic lower respiratory diseases	Chronic liver disease and cirrhosis
5	Alzheimer's disease	Cerebrovascular diseases	Chronic lower respiratory diseases	Diabetes mellitus	Chronic liver disease and cirrhosis	Diabetes mellitus
6	Cerebrovascular diseases	Alzheimer's disease	Diabetes mellitus	Chronic lower respiratory diseases	Suicide	Cerebrovascular diseases
7	Suicide	Suicide	Alzheimer's disease	Suicide	Diabetes mellitus	Suicide
8	Diabetes mellitus	Diabetes mellitus	Assault	Alzheimer's disease	Cerebrovascular diseases	Chronic lower respiratory diseases
9	Chronic liver disease and cirrhosis	Chronic liver disease and cirrhosis	Certain conditions originating in the perinatal period	Nephritis, nephrotic syndrome and nephrosis	Influenza and pneumonia	Certain conditions originating in the perinatal period
10	Influenza and pneumonia	Influenza and pneumonia	Nephritis, nephrotic syndrome and nephrosis	Influenza and pneumonia	Alzheimer's disease	Alzheimer's disease

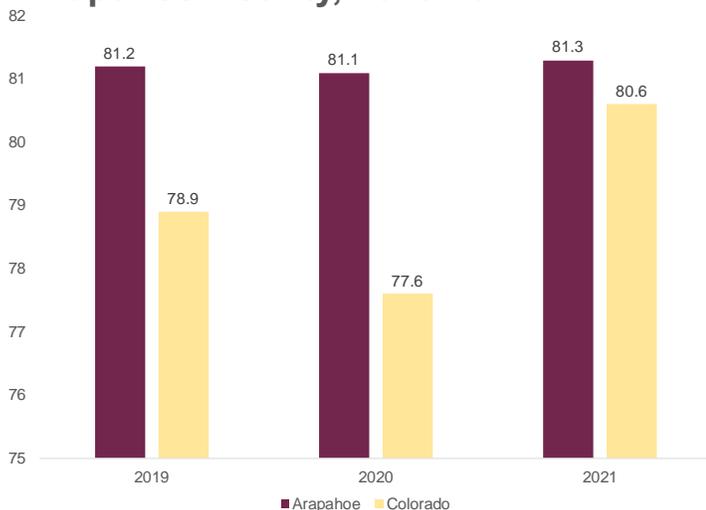
Source: Vital Records Program, Colorado Department of Public Health and Environment

# Appendix

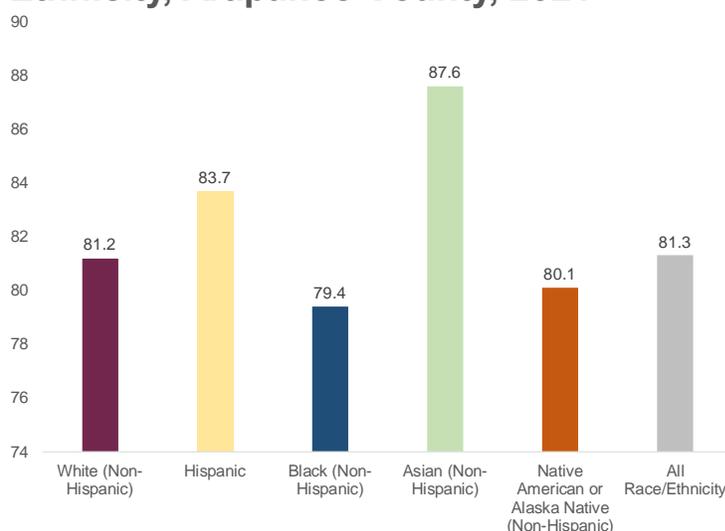
Tri-County Health Department | Community Health Assessment 2022

Arapahoe County, Colorado

**Figure 1: Life Expectancy,\* in Years, Arapahoe County, 2019-2021**



**Figure 2: Life Expectancy by Race/Ethnicity, Arapahoe County, 2021**



\*Life expectancy is defined as the average number of years a population of a certain age would be expected to live, given a set of age-specific death rates in a given year.<sup>1</sup>

Source: Vital Statistics Program, Colorado Department of Public Health and Environment

**Table 3: Years of Potential Life Lost, Age-Adjusted Rates for 10 Leading Causes of Death, Arapahoe County, 2013-2015 & 2018-2021**

Years of Potential Life Lost (YPLL) indicates the years of potential life lost before a specified age. Tri-County Health Department has calculated YPLL based on age 65. Each death occurring in Arapahoe County before the age of 65 contributes to the total number of years of potential life lost. For example, a person dying at age 25 contributes 40 years of life lost, whereas a person who dies at age 55 contributes 10 years of life lost. The YPLL measure is reported as a rate per 100,000 population and is age-adjusted to the 2000 US population.<sup>2</sup>

Cause of Death	2013-2015	2018-2021
Unintentional injuries*	667	909
Suicide	454	526
Cancer	444	399
Heart disease	262	282
Perinatal period conditions	333	257
Congenital malformations	153	145
Chronic liver disease and cirrhosis	142	174
Homicide	145	184
Diabetes	58	80
Cerebrovascular diseases	54	45
COVID-19	—	58
All Causes	3,407	3,844

\*Unintentional injuries include causes such as drug overdose, motor vehicle crashes, falls, and other accidental events that may lead to a death.

<sup>1</sup> Institute for Health Metrics and Evaluation

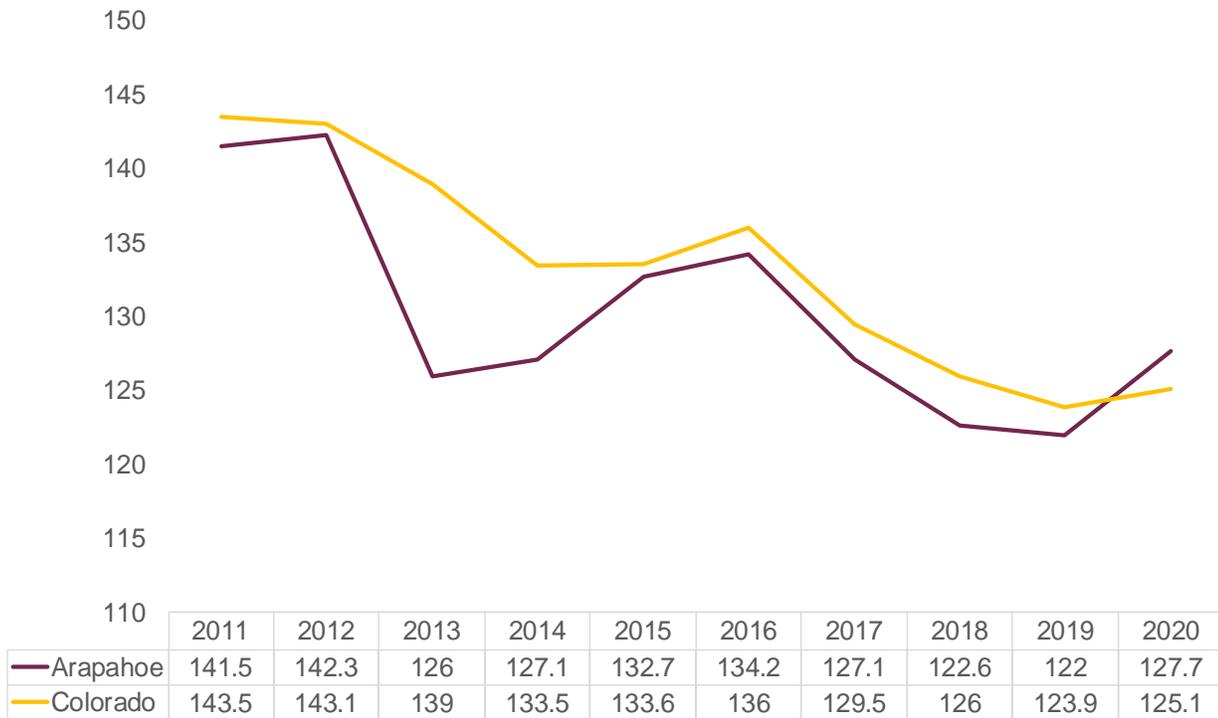
<sup>2</sup> County Health Rankings

Source: Vital Records Program, Colorado Department of Public Health and Environment

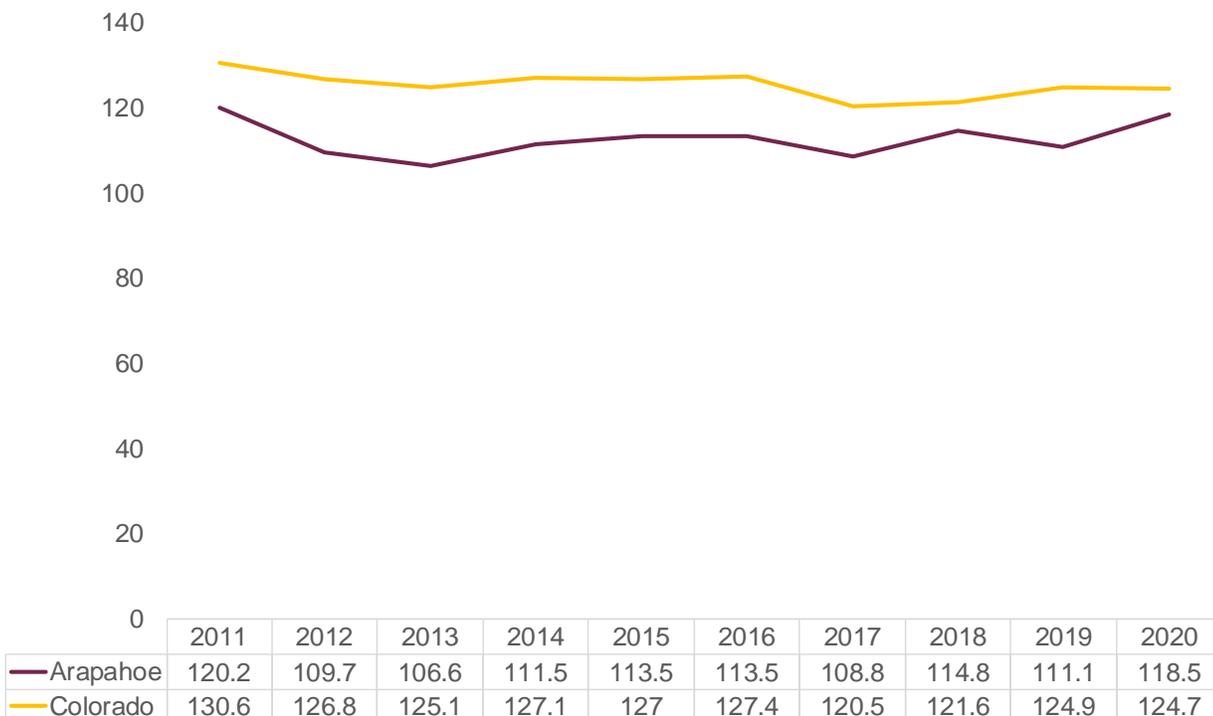
# Appendix

Tri-County Health Department | Community Health Assessment 2022  
 Arapahoe County, Colorado

**Figure 3: Cancer Age-Adjusted Death Rate (per 100,000 population), 2011-2020**



**Figure 4: Heart Disease Age-Adjusted Death Rate (per 100,000 population,) 2011-2020**

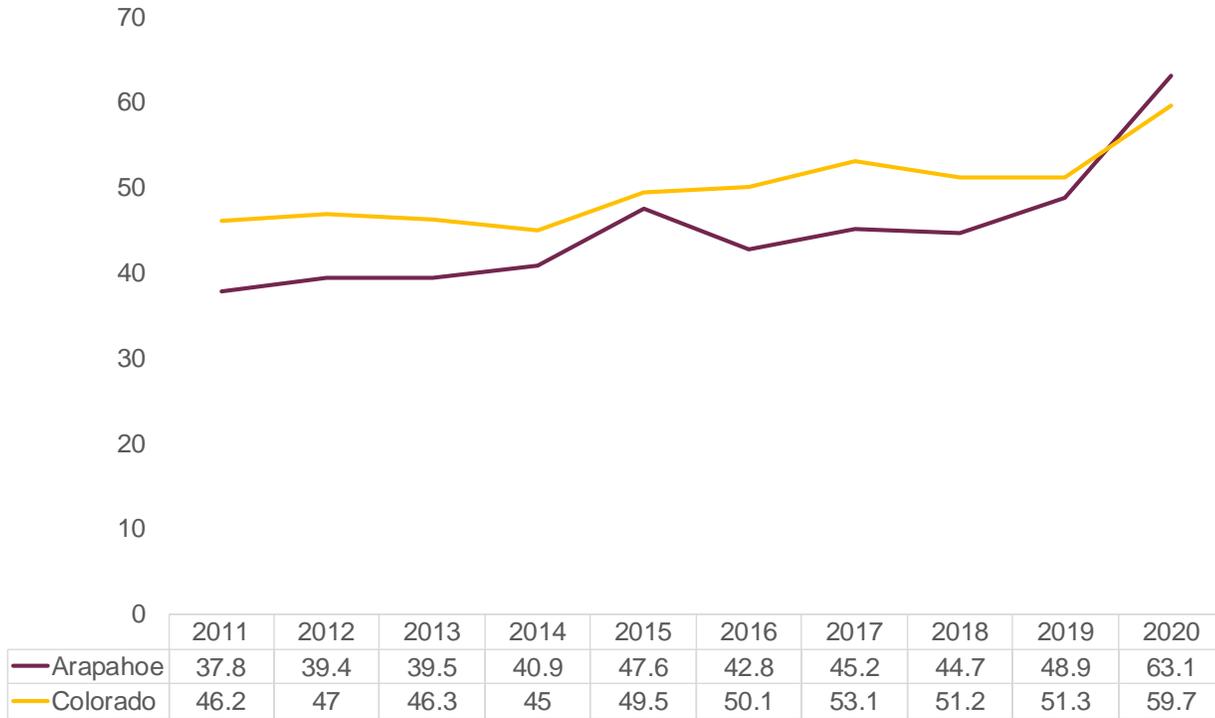


Source: Vital Records Program, Colorado Department of Public Health and Environment

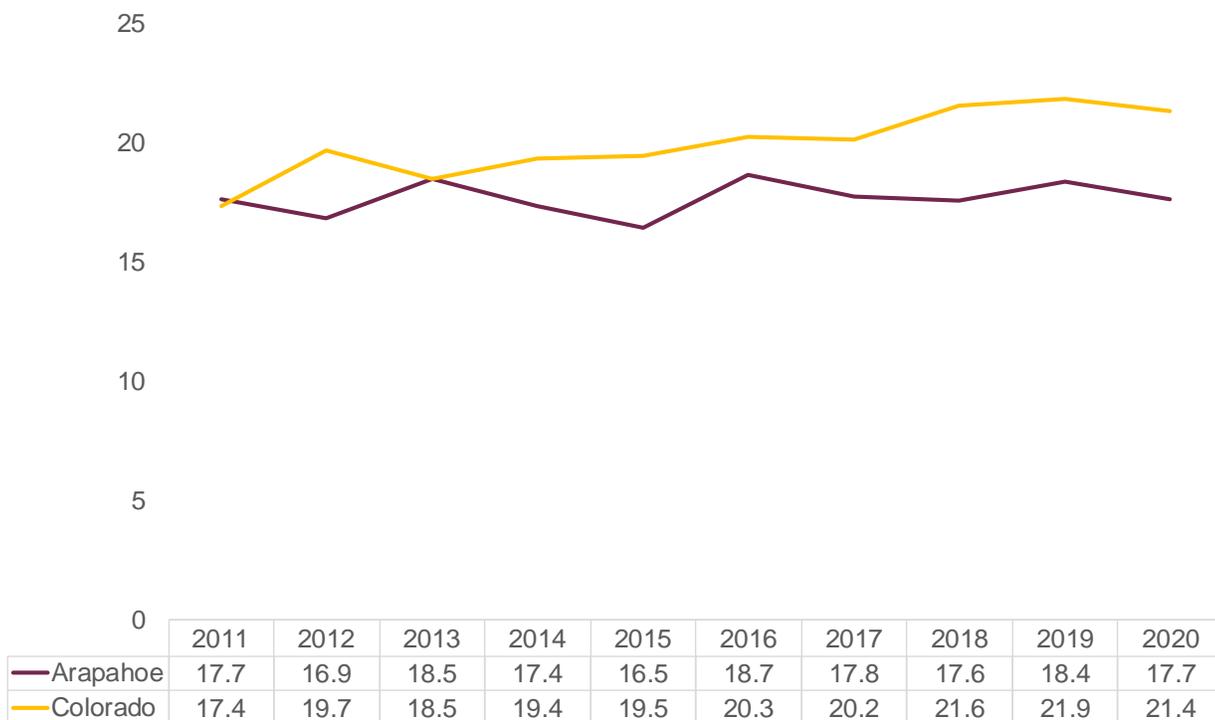
# Appendix

Tri-County Health Department | Community Health Assessment 2022  
 Arapahoe County, Colorado

**Figure 5: Unintentional injury age-adjusted death rate per 100,000 population, 2011-2020**



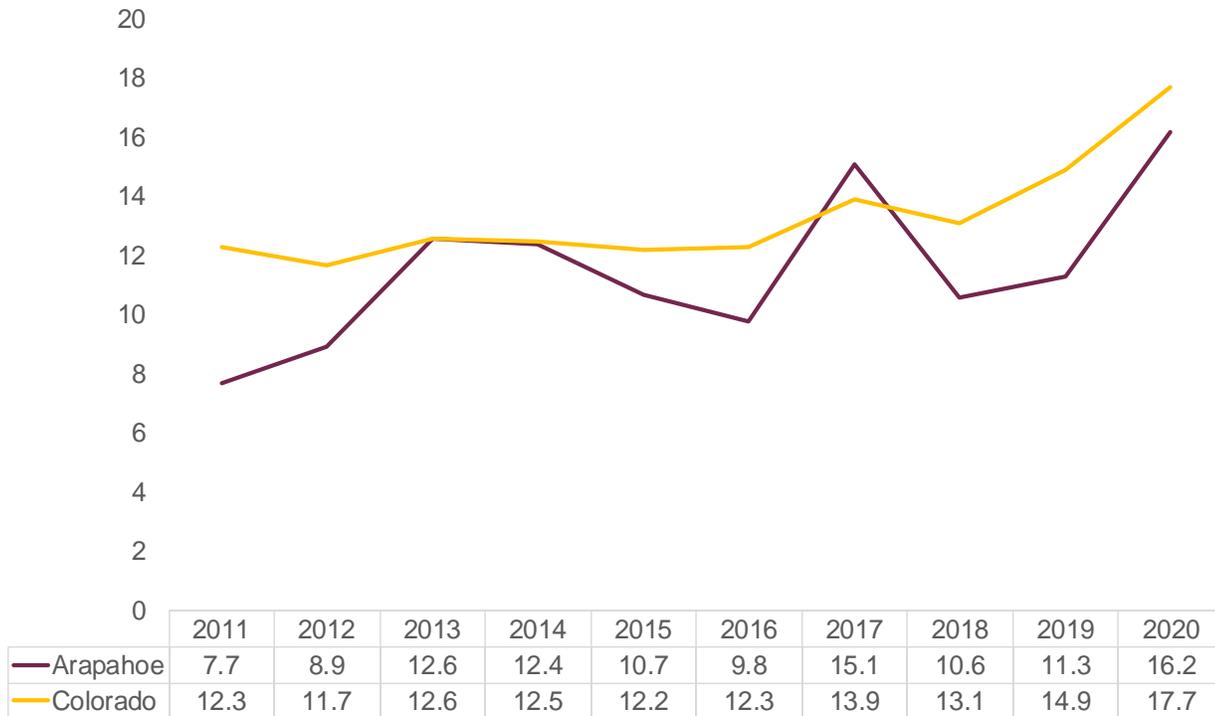
**Figure 6: Suicide age-adjusted death rate per 100,000 population, 2011-2020**



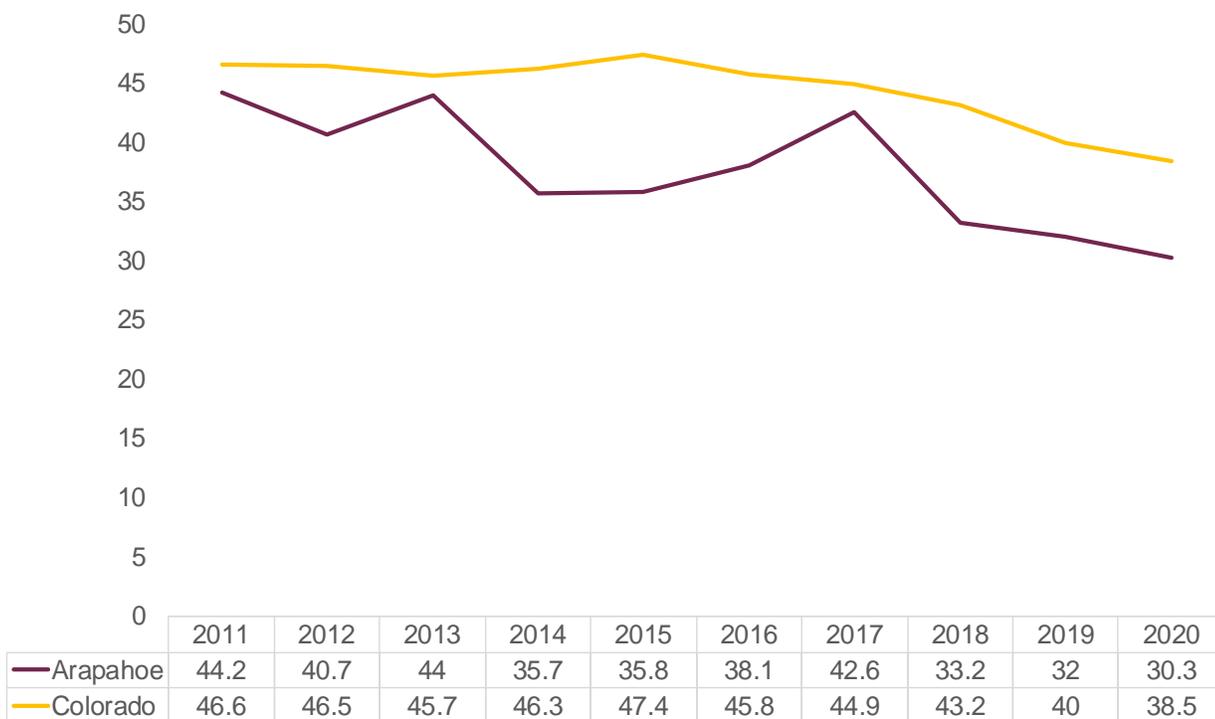
Source: Vital Records Program, Colorado Department of Public Health and Environment

# Appendix

**Figure 7: Chronic liver disease and cirrhosis age-adjusted death rate per 100,000 population, 2011-2020**



**Figure 8: Chronic lower respiratory disease age-adjusted death rate per 100,000 population, 2011-2020**

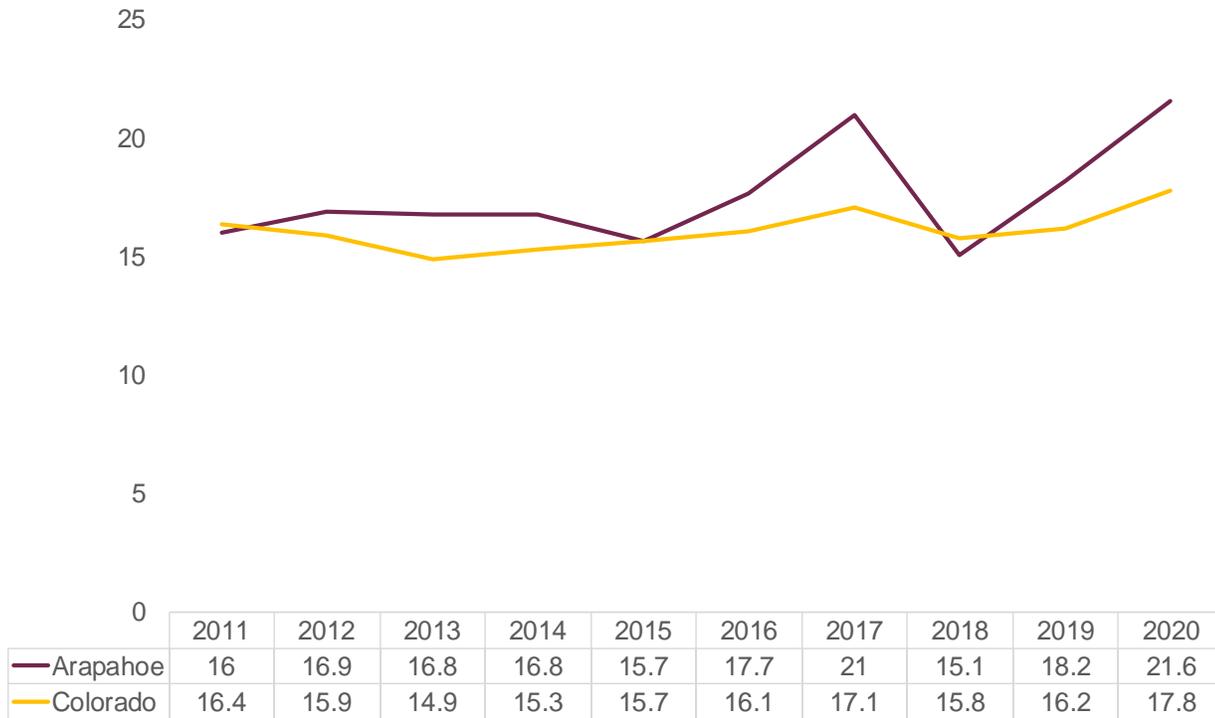


Source: Vital Records Program, Colorado Department of Public Health and Environment

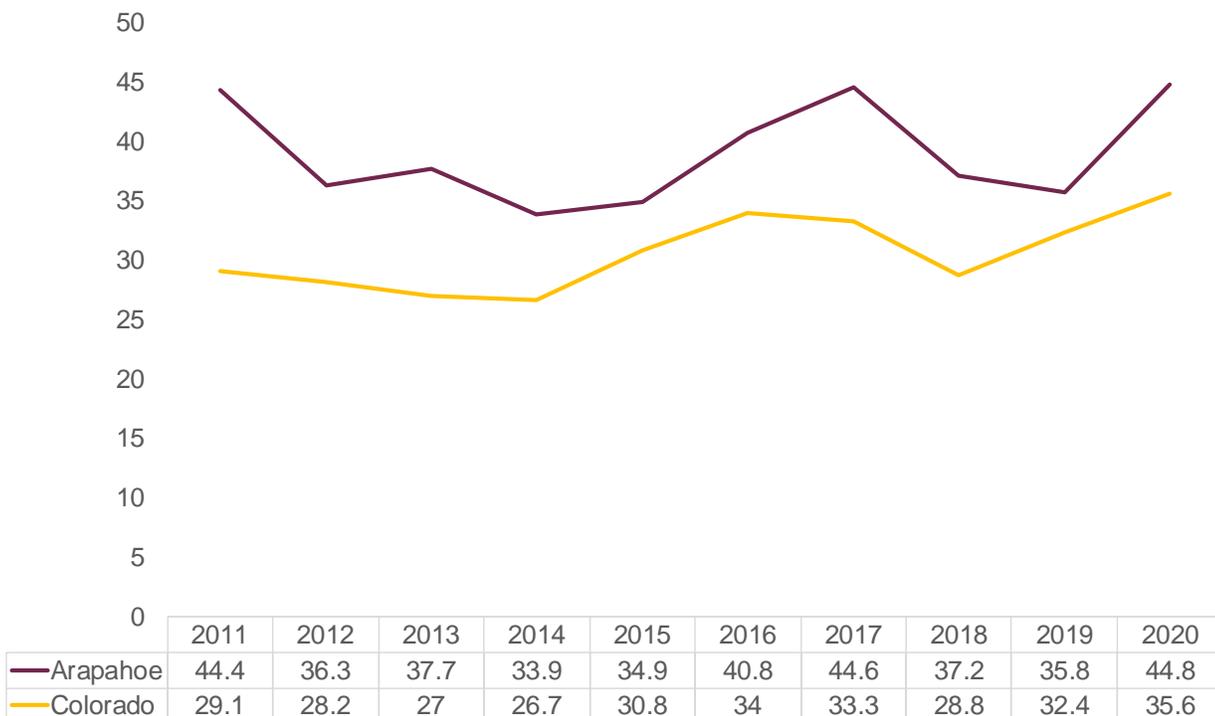
# Appendix

Tri-County Health Department | Community Health Assessment 2022  
 Arapahoe County, Colorado

**Figure 9: Diabetes age-adjusted death rate per 100,000 population, 2011-2020**



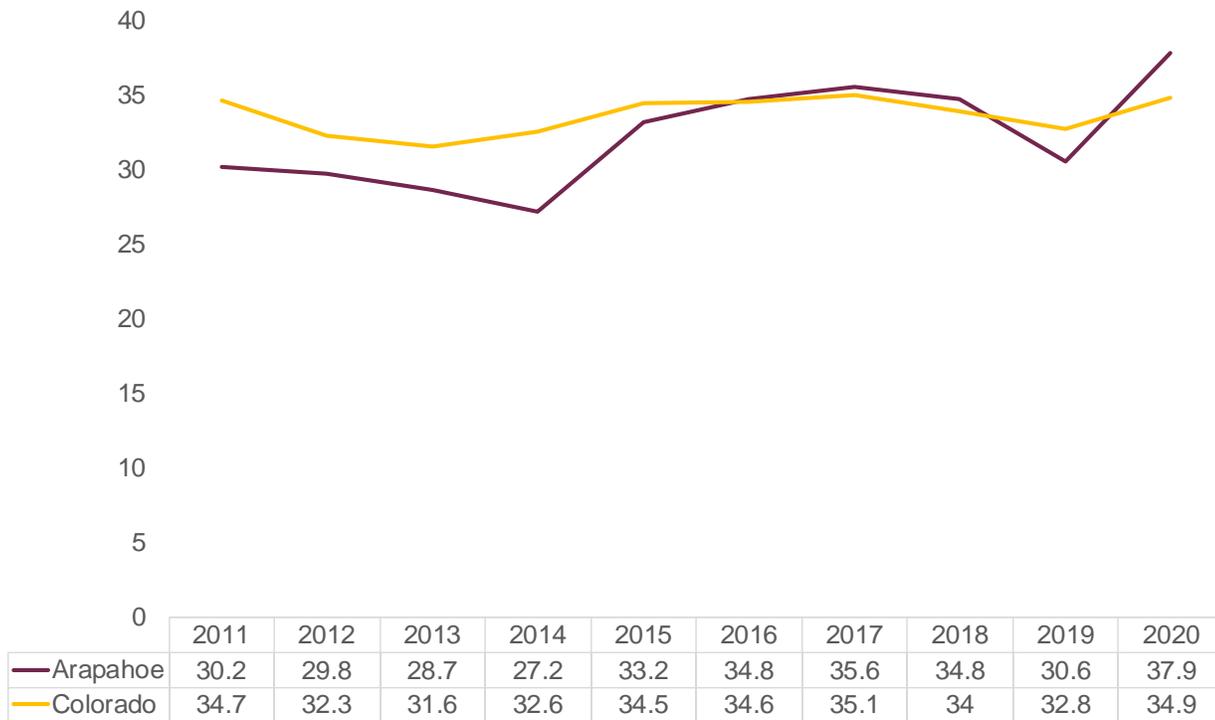
**Figure 10: Alzheimer's age-adjusted death rate per 100,000 population, 2011-2020**



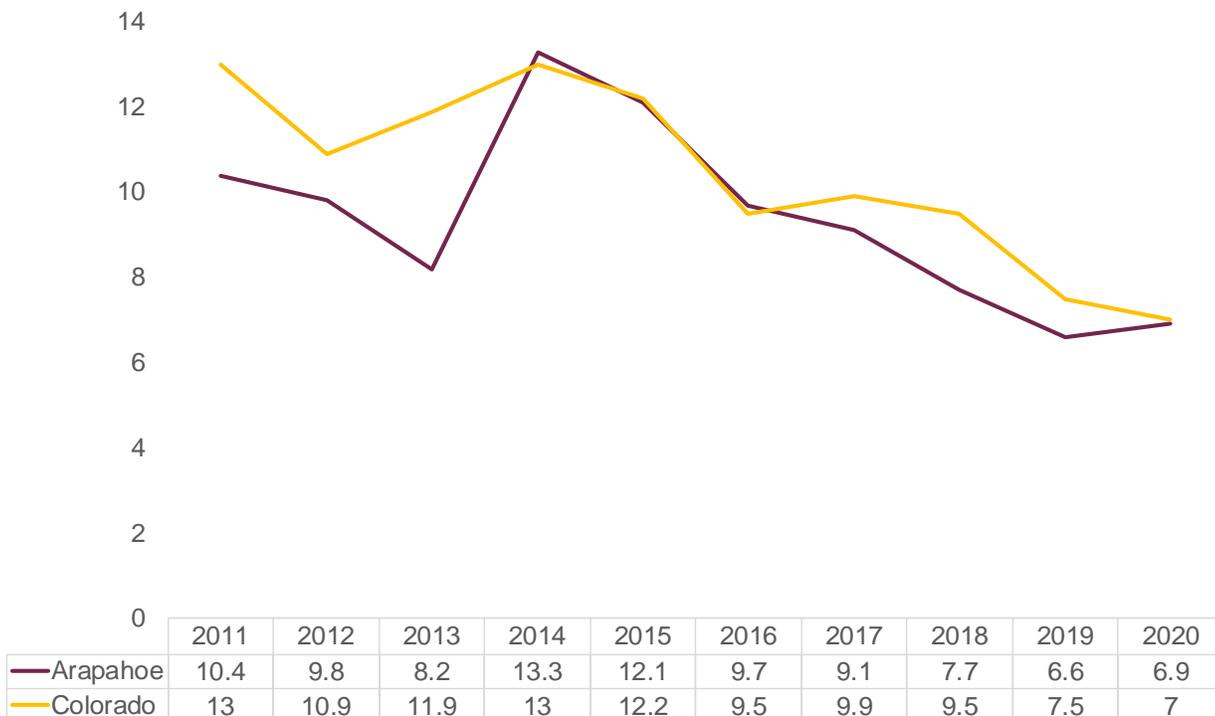
Source: Vital Records Program, Colorado Department of Public Health and Environment

# Appendix

**Figure 11: Stroke age-adjusted death rate per 100,000 population, 2011-2020**



**Figure 12: Influenza and pneumonia age-adjusted death rate per 100,000 population, 2011-2020**

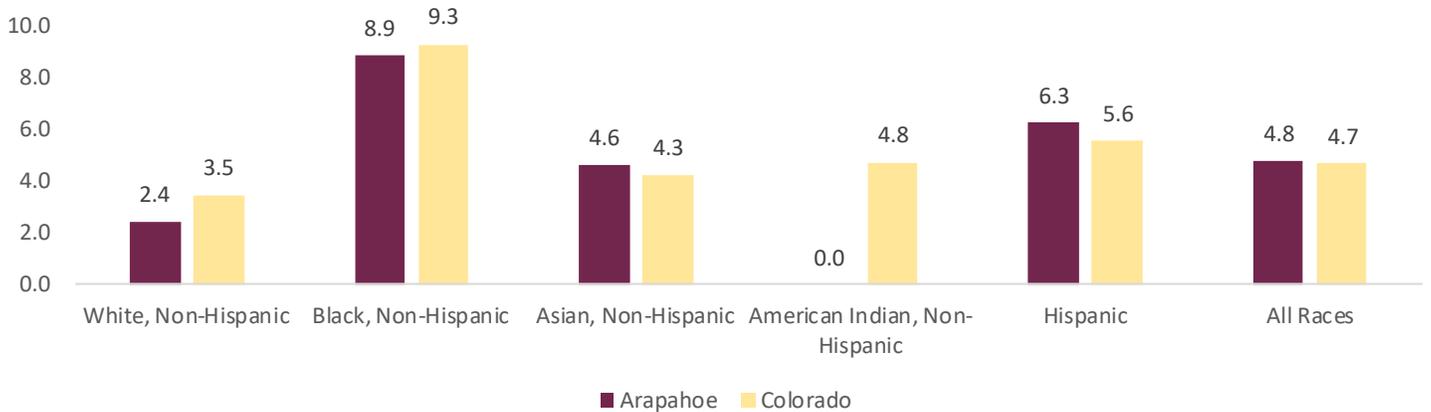


Source: Vital Records Program, Colorado Department of Public Health and Environment

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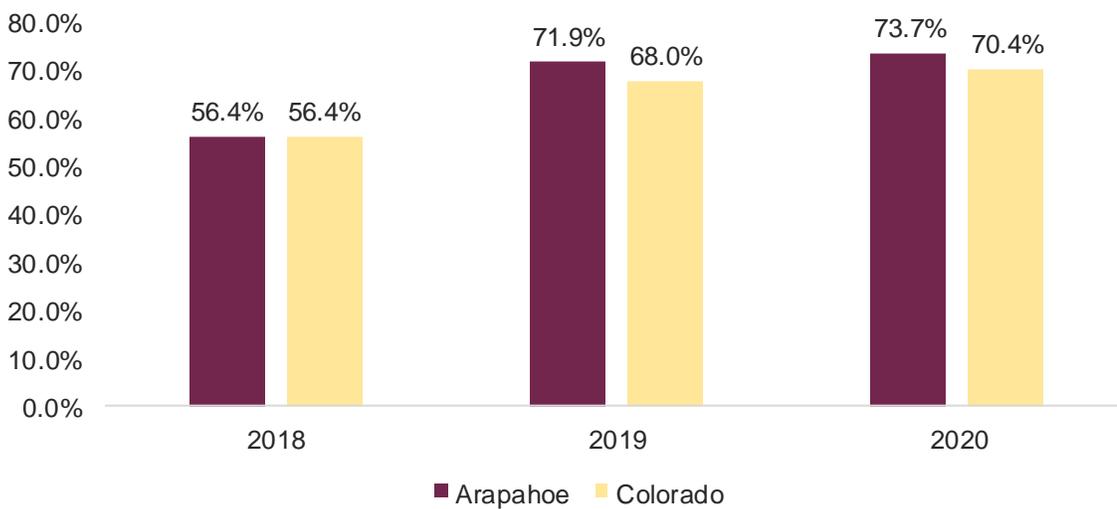
Tri-County Health Department | Community Health Assessment 2022  
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**Figure 13: Infant Mortality Rate (per 1,000 births), by Race/Ethnicity, 2018 - 2020**



Source: Vital Records Program, Colorado Department of Public Health and Environment

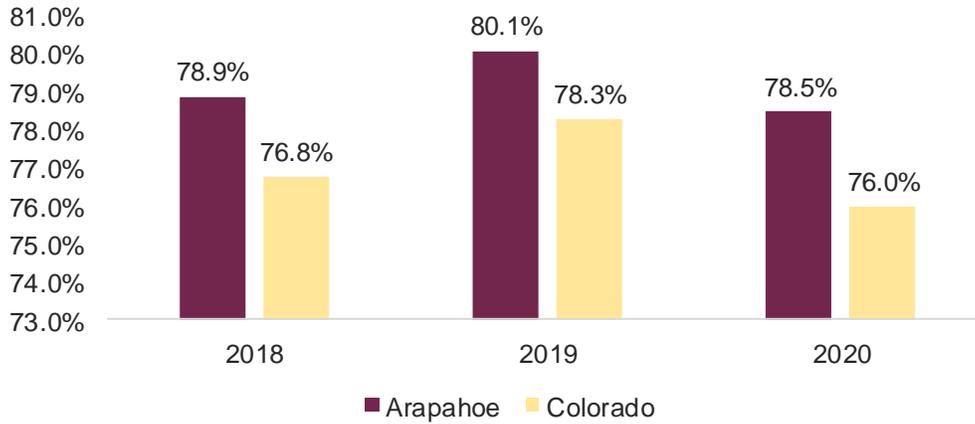
**Figure 14: Percent Received Flu Shot in Past 12 Months, Adults Aged 65 and Older, 2018-2020\***



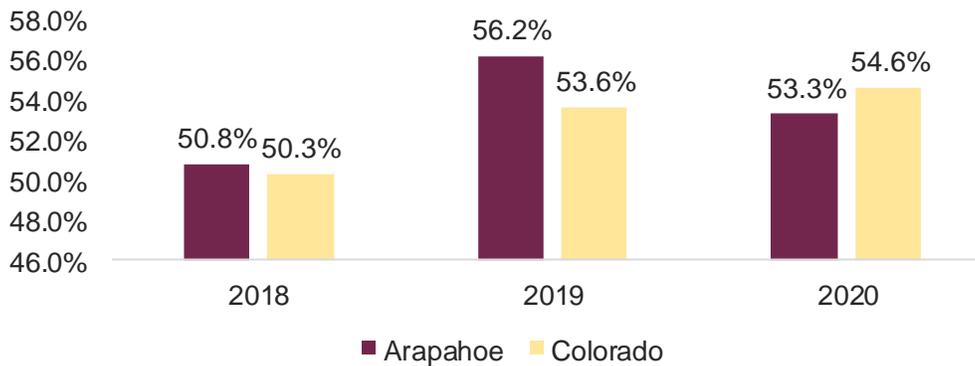
\*Note: Question wording changed from 2018 to 2019. In 2018, the question asked: "During the past 12 months, have you had either a flu shot or a flu vaccine that was sprayed in your nose? (A new flu shot came out in 2011 that injects vaccine into the skin with a very small needle. It is called Fluzone Intradermal vaccine. This is also considered a flu shot.)" In 2019 and 2020, the question was worded: "During the past 12 months, have you had either flu vaccine that was sprayed in your nose or flu shot injected into your arm?"

Source: Colorado Department of Public Health and Environment, Behavioral Risk Factor Surveillance System

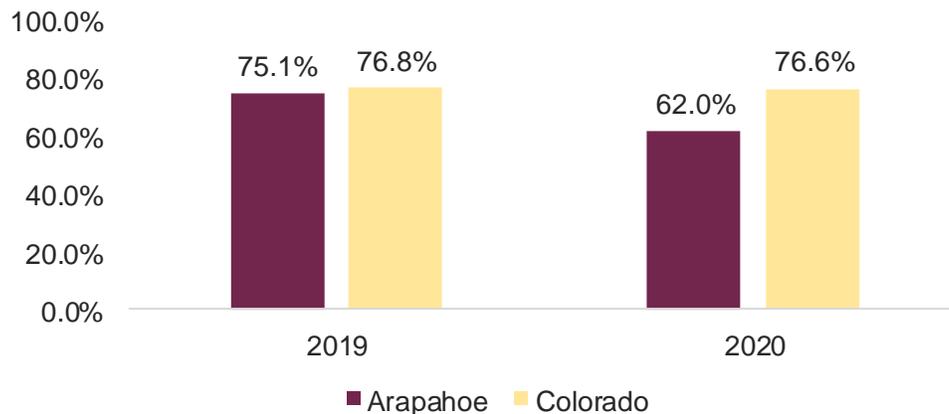
**Figure 15: Percent of Residents that Have Ever Received the Pneumonia Vaccine, Adults Aged 65+ and Older, 2018-2020**



**Figure 16: Percent of Residents that Have Ever Received the Shingles or Zoster Vaccine, Adults Aged 65+ and Older, 2018-2020**



**Figure 17: Percent of Residents that Have Received the Tdap\* Vaccine Since 2005, Adults Aged 65+ and Older, 2019-2020**



\*Tdap: Tdap vaccine (tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis) protects against: Whooping cough (pertussis), Tetanus, and Diphtheria

Source: Colorado Department of Public Health and Environment, Behavioral Risk Factor Surveillance System